

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
525 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 5
to
CONTRACT NO. 071B1300105
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
Dewpoint Knapp's Centre 300 S. Washington Square, Suite 200 Lansing, MI 48933	Joe Findlater	joe.findlater@dewpoint.com
	PHONE	VENDOR FEIN # (LAST FOUR DIGITS ONLY)
	517-881-4973	0595

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
PROGRAM MANAGER	DTMB	Glenn Gorton	517-241-2368	gortong@michigan.gov
CONTRACT ADMINISTRATOR	DTMB	Jarrold Barron	517-284-7026	Barronj1@michigan.gov

CONTRACT SUMMARY			
DESCRIPTION: Michigan Statewide Longitudinal Data System (MSLDS)			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
November 16, 2010	November 15, 2014	5 one year	November 15, 2015
PAYMENT TERMS	F.O.B.	SHIPPED TO	
N/A	N/A	N/A	
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			
N/A			

DESCRIPTION OF CHANGE NOTICE				
EXTEND CONTRACT EXPIRATION DATE	EXERCISE CONTRACT OPTION YEAR(S)	EXTENSION BEYOND CONTRACT OPTION YEARS	LENGTH OF OPTION/EXTENSION	EXPIRATION DATE AFTER CHANGE
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 year	November 15, 2016
CURRENT VALUE		VALUE/COST OF CHANGE NOTICE	ESTIMATED REVISED AGGREGATE CONTRACT VALUE	
\$8,454,224.83		\$809,340.00	\$9,263,564.83	
DESCRIPTION: Effective September 10, 2015, The State exercises Option Year 2 and adds \$809,340.00 for the Phase IV services described in the attached Statement of Work. All other pricing, terms, and conditions remain the same. Per contractor and agency agreement, the approval of DTMB Procurement, and the approval of the State Administrative Board September 10, 2015.				

MSLDS Optional Maintenance: Year 2

(Phase IV - October 1st, 2015 - September 30th, 2016)

Addendum to Contract #071B1300105



Presented by:
Joe Findlater
July 14, 2015
517-881-4973
Joe.Findlater@dewpoint.com

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Table A: Staffing / Roles / Rates

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Executive Summary

This contract amendment outlines the approach and billing structure for Maintenance and Transition (Phase IV) of the Michigan Statewide Longitudinal Data System Project. It is a supplement to the State of Michigan Contract # 071B1300105 and all associated contract amendments. It is understood by both Dewpoint and the State that the content of the aforementioned contract including, but not limited to the terms and conditions, also apply to Phase IV.

As is noted in Article 1 – Statement of Work (SOW) of the State of Michigan Contract #071B1300105, *"The fixed price in this contract is only for the first phase of the MSLDS project. The State may choose to exercise contract change requests for additional work including but not limited to the definition and delivery of future project phases. At this time, the total project delivery period is not expected to exceed four years. The State may also choose to exercise additional optional maintenance years beyond this period."*

It has been determined that it is in the best interest of the State to position Phase IV as a continuation maintenance and transition phase. While Phase I and Phase II of this project were structured as fixed price/deliverables based agreements, effort associated with Optional Year 1 Maintenance (Phase III) was structured as a time and material basis (using a fixed hourly rate). It is being presented that Optional Year 2 (Phase IV) also be structured on a time and material basis, using role associated fixed hourly rates. Dewpoint's primary role in Phase IV will be to provide well qualified resources to augment the State's project team to assist with work required to maintain the SLDS and implement new functionality as required. This may include, but is not limited to, assistance with requirements definition and documentation, prioritization, consultation, design, development and testing of SLDS functionality.

Solution Overview

Phase IV of the SLDS Project is a maintenance and transition phase. As is noted in the Contract #071B1300105 Statement of Work, Section H – Other Services, *“The State may choose to process Contract changes and/or exercise Contract options to deliver future project phases and or conduct maintenance activities.”*

In Phase IV, Dewpoint will provide a team of individuals to complete the assigned work as required. These work assignments will be directed by the DTMB Sr. Project Manager, the CEPI Longitudinal Data Manager and the DTMB/CEPI Development Manager. Details related to the potential work to be performed are included later in the amendment. An hourly rate structure, with a normal monthly resource hourly allocation of 162 hours, will be used for all Dewpoint Team members, for all activities performed during the Phase IV Maintenance and Transition. This hourly rate structure and the associated assumptions are included in the Pricing Methodology section of this contract amendment.

Statement of Work

Tasks and Deliverables

System Development Tasks and Deliverables

The tasks and deliverables pertaining to Phase IV System Development will consist of the following system development activities:

- Requirements Definition and Documentation
- Design
- Development

As has been the case in Phases I, II and III, the Phase IV Maintenance and Transition Phase work will follow the State of Michigan development methodologies and standards established in the previous project phases. Dewpoint will bring experience and expertise to assist the State with each System Development Task and Deliverable.

Requirements Definition and Documentation

As required, Dewpoint will provide the necessary resources to lead requirements definition and documentation sessions, as directed by the State. Requirements sessions should be conducted with the system owners and subject matter experts for any new or modified SLDS functionality delivered in Phase IV. Depending on the type of change or new function, various types of Dewpoint resources will be recommended to lead and document the results of the requirements sessions. For instance, it is recommended that both a Sr. Business Analyst and DBA participate in requirements sessions for new SLDS Data Sources. Dewpoint will work with the State to determine the appropriate participants as new or enhanced functionality modifications are identified and the associated levels of complexity are determined.

Dewpoint will work with the State to create a formalized estimate approach to ensure consistency.

Design, Development, Testing, and Implementation

It is expected that Dewpoint will be directed to develop new and/or enhance existing SLDS functionality during Phase IV of the SLDS project. To meet this objective, Dewpoint will perform certain Design, Development, Testing and Implementation based activities.

Pricing Methodology: Phase IV

Under this contract amendment, maintenance/transition resources will be billed at an hourly rate per resource role. Dewpoint will work with the State to establish a staffing plan to satisfy the required staff augmentation levels. On a quarterly basis, Dewpoint will meet with the State project manager to validate future quarter staffing levels provided for under this contract vehicle.

Assumptions for Phase III approach and pricing

- 1) Rates are based on the State of Michigan published normal working schedule.
- 2) Effort will include maintenance to the State of Michigan Longitudinal Data System repository.
- 3) The Dewpoint Team will observe the published State of Michigan Holiday schedule.
- 4) The Dewpoint Team members will each have an expected resource hourly allocation of 162 hours per calendar month. Certain Dewpoint resources will be assigned a percentage of the full monthly resource allocation as determined by DTMB Sr. Project Manager. The pre-determined resource allocation percentages and specific Dewpoint resource role pricing are detailed in the attached *Table A: Staffing / Roles / Rates*. All related work activities performed by Dewpoint resources shall not exceed 40 hours per calendar week. Any expectations of a Dewpoint resource work-effort exceeding 40 hours per calendar week, must be pre-approved by the DTMB Sr. Project Manager.
- 5) The State of Michigan agrees to give one month notice to release resources from the project, unless there are suitable grounds for more immediate termination such as a security breach or extreme performance degradation. The DTMB Sr. Project Manager will escalate to the Dewpoint PMO if such a situation arises.
- 6) The State of Michigan will be responsible for the general management of the Phase IV project. The Dewpoint team will be responsible for assisting the State in meeting their stated project objectives. Dewpoint may assist the State with project level deliverables including, but not limited to, requirements definition, documentation, design, development, testing or implementation.
- 7) Dewpoint will provide a single point of contact for all billing and contractual issues (including issue escalation, corporate oversight and general contract management).
- 8) Dewpoint shall substantially perform the tasks set forth by the State of Michigan. In the event Dewpoint fails to complete the tasks as required, the State may escalate the issue in writing to the Dewpoint single point of contact. Within five (5) business days, Dewpoint will provide the State a written explanation of specific steps and named Dewpoint individuals who will rectify the situation.
- 9) The State of Michigan has the right to approve or deny any key staffing changes that are initiated by Dewpoint (other than those due to employee termination).

Table A: Staffing / Roles / Rates

Staffing Category	Definition	Hourly Rate	Contract Period Total Allocated Hours
Project Manager	<ul style="list-style-type: none"> Provides oversight, leadership, accountability and project management functions for the project. This project requires a project manager due to the level of complexity, degree of intricate detail and accountability to executive leadership. Provides strategic planning and management of the project while providing oversight for system development, which includes planning, organizing, communicating, consulting and serving as liaison with the client. Responsible for coordinating and leading the project team for the duration of the project while maintaining project records for review of the project. Ensures the project follows the appropriate SUITE and PMM practices. 	\$120	312
Systems Architect	<ul style="list-style-type: none"> Provides leadership to create and maintain the framework and implement the overall technology strategy. This will encompass tools and processes across all operating system platforms. Responsible for creating the physical database tables. Performs the physical database design, works with system administrators and uses data packages. Uses tuning tools to improve database performance. Develop the overall data architecture strategy of the system, ensuring reusability, integration, and optimization. Perform detailed data and requirements analysis and developing the dimensional data model. Ensure system addresses the State's business requirements and enforces rules and performs calculations efficiently and accurately as identified by the State. Work with the Project Manager to develop plans for the overall development of the system and ensure that the proper design documentation has been developed. Serve as technical subject matter expert on data warehousing methodology used on the project and tools used in the system's development. Manage the physical design of the system and all its component parts. Architect and document the ETL process from end-to-end including coordination of testing activities. Coordinate knowledge transfer and phase hand-off to State resources. 	\$164	0

Staffing Category	Definition	Hourly Rate	Contract Period Total Allocated Hours
Business Analyst	<ul style="list-style-type: none"> Gathers requirements using interviews, document analysis, requirements workshops, survey, site visits, business process descriptions, use cases, scenarios, tasks and/or workflow analysis. 	\$100	996
Technical Writer	<ul style="list-style-type: none"> Organizes material and complete writing assignments according to set standards regarding order, clarity, conciseness, style, and terminology. Maintains records and files of work and revisions. Works with SoM and team members to establish technical specifications and to determine subject material to be developed for publication. 	\$80	0
Database Administrator	<ul style="list-style-type: none"> Responsible for ensuring the availability and performance of the databases that support the systems. Works to ensure that the associated hardware resources allocated to the databases perform with high resilience and performance tuning. Responsible for troubleshooting and problem solving. Responsible for improvement and maintenance of the databases to include rollout and upgrades. May be responsible for setting up the database systems and making sure those systems operate efficiently. 	\$110	1,992
Configuration Management Expert	<ul style="list-style-type: none"> Plans and coordinates preparation of project documentation such as drawings and specifications. Work closely with development, QA and Operations to implement release processes. 	\$112	0
SAS Developer	<ul style="list-style-type: none"> Provides administration, maintenance and support for SAS software and supported infrastructure. Provides business user support and assistance. Provides testing and validation of SAS tools and applications in the project environment. Identifies, selects and designs efficient solutions to advance the project. Understands and complies with all of the standard policies and procedures that impact the project. 	\$120	2,988
Web Designer / Developer	<ul style="list-style-type: none"> Responsible for the development and design of major and minor web applications and components for internal and external users. Design, develop, test and deliver web site functionality as pre-determined by the system owners. 	\$118	0

	<ul style="list-style-type: none"> Participation in all aspects of support and defect resolution. 		
Staffing Category	<ul style="list-style-type: none"> Definition 	Hourly Rate	Contract Period Total Allocated Hours
	<ul style="list-style-type: none"> 		
Architecture Analysis / Review	<ul style="list-style-type: none"> Perform detailed analysis of the physical design of the system and all its component parts. Analyze the overall architecture of the system, ensuring reusability, integration, and optimization. Review the system to ensure architecture will support ongoing operations of the State's business requirements and enforce rules and perform calculations efficiently and accurately as identified by the State. <p>Review/Develop Security Models as required</p>	\$160	498

Table B: Summary of the Project Cost:

	Resource/Role	Rate per Hour	Cost (\$)	<u>Comment</u> 10/01/2015 thru 9/30/2016
A.	Project Manager	\$120	\$37,440.00	Average 24 hours per month - not to exceed 312 hours.
B.	System Architect	\$164	\$0.00	N/A
C.	Business Analyst	\$100	\$99,600.00	Average 162 hours per month - (6 month period) - not to exceed 996 hours.
D.	Technical Writer	\$80	\$0.00	N/A
E.	Data Base Administrator	\$110	\$219,120.00	Average 162 hours per month - not to exceed 1,992 hours .
F.	Configuration Manager Expert	\$112	\$0.00	N/A
G.	SAS Developer	\$125	\$373,500.00	Two Resources: (1) Average 162 hours per month (12 month period) (1) Average 162 hours per month (6 month period). Combined total - not to exceed 2,988 hours.
H.	Web Designer / Developer(s)	\$118	\$0.00	N/A
I.	Architecture Analysis / Review	\$160	\$79,680.00	Average 83 to 162 hours per month - not to exceed 498 hours.
J.	SAS Architect / Support		\$0.00	N/A
Total Project Cost			\$809,340.00	

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 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
 PROCUREMENT
 P.O. BOX 30026, LANSING, MI 48909
 OR
 525 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 4
 to
CONTRACT NO. 071B1300105
 between
THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
Dewpoint Knapp's Centre 300 S. Washington Square, Suite 200 Lansing, MI 48933	Joe Findlater	joe.findlater@dewpoint.com
	PHONE	VENDOR FEIN # (LAST FOUR DIGITS ONLY)
	517-881-4973	0595

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
PROGRAM MANAGER	DTMB	Glenn Gorton	517-241-2368	gortong@michigan.gov
CONTRACT ADMINISTRATOR	DTMB	Jarrod Barron	517-284-7026	Barronj1@michigan.gov

CONTRACT SUMMARY			
DESCRIPTION: Michigan Statewide Longitudinal Data System (MSLDS)			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
November 16, 2010	November 15, 2014	5 one year	November 15, 2015
PAYMENT TERMS	F.O.B.	SHIPPED TO	
N/A	N/A	N/A	
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			
N/A			

DESCRIPTION OF CHANGE NOTICE				
EXTEND CONTRACT EXPIRATION DATE	EXERCISE CONTRACT OPTION YEAR(S)	EXTENSION BEYOND CONTRACT OPTION YEARS	LENGTH OF OPTION/EXTENSION	EXPIRATION DATE AFTER CHANGE
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>		
CURRENT VALUE	VALUE/COST OF CHANGE NOTICE	ESTIMATED REVISED AGGREGATE CONTRACT VALUE		
\$8,435,934.83	\$18,290.00	\$8,454,224.83		

DESCRIPTION:

Effective 4/13/2015, this contract is amended pursuant to the attached Change Control Request to add \$18,290.00 for additional web designer/developer hours at the rate of \$118.00 per hour, not to exceed 155 total hours. These additional hours are permitted on a time and material basis pursuant to Contract Change Notice 2.

All other pricing, terms, and conditions remain the same. Per contractor and agency agreement, the approval of DTMB Procurement, and the approval of the State Administrative Board June 2, 2015.

**State of Michigan
Michigan Statewide Longitudinal Data System
Change Control Request**

A. General Information

Project ID/Acronym:	MSLDS	Date:	02/19/2015
Controlling Agency:	CEPI/DTMB	Modification Date:	
Prepared by:	Greg Bodnar	Control Number (From Control Log)	202

B. Requestor Information

Proposed Change Description and References:

The requestor will provide information concerning the requested change along with any supporting documentation.

This change control request is a time and material change for an addition of up to 155.0 hours of web designer/developer hours to address the integration of the Workforce Development Agency online web display reports through the navigation/action selection of the MI School Data Portal. This activity will be performed in conjunction with the ongoing Phase III - Michigan Statewide Longitudinal Data System Maintenance (Contract No. 071B13300105 / PO. 084N4304344).

The duration of work effort is a time period of February 1, 2015 through September 30, 2015.

The architecture, design, consultation and development activities include the following:

1. Architect the overall inclusion of the Workforce display reports and manage the development/modifications required for delivery and implementation of the production reporting project.
2. Perform supportive staff resource allocation and direction.
3. Creation of a 'shell page' in the MI School Data Portal that includes style standards for proper left and top navigation buttons/command words, including an iFrame to load the Workforce Development URL.
4. Ongoing maintenance, support and environment tracking/promotion.

This web designer/developer augmentation activity will be viewed as a Time and Material agreement, with the stipulation of a '*not to exceed*' allocation of person-hours associated with this specific Workforce Development site integration activity.

Impact of Not Implementing Proposed Change:

Dewpoint would not be able to assist CEPI and the Workforce Development Agency in continued maintenance and enhancement to the Michigan Statewide Longitudinal Data System and the MI School Data portal.

Alternatives:

Present a new RFP and engage a new resource provider.

C. Initial Review Results of the Change Request

Initial Review Date: 2/19/2015

Assigned to: Greg Bodnar

☒ Approve for Impact Analysis

☐ Reject

☐ Defer Until:

Reason:

D. Initial Impact Analysis

Baselines Affected: Continued maintenance and enhancement to the MSLDS and MI School Data portal.

Configuration Items Affected: Not applicable

Cost / Schedule Impact Analysis Required?



Yes
(below)



No

Impact on Cost: \$18,290.00

Impact on Schedule: Additional maintenance and enhancement/integration activities for an eight (8) month period.

Impact on
Resources:

The Dewpoint staff augmentation will mentor and significantly assist the DTMB/CEPI existing staff.

Final Review
Results:

Proceed with change

Review Date:

2/19/2015

Classification:



HIGH



MEDIUM



LOW

E. Impact Analysis Results

Specific Requirements Definition:

This additional Web design/development/integration activity is to be considered a time and material activity, with a stipulation of a "not to exceed" allocation of 155.0 person/role hours.

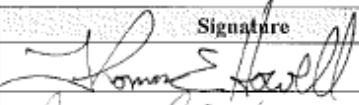


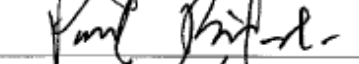

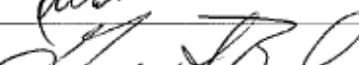
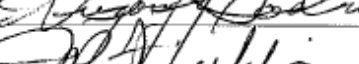
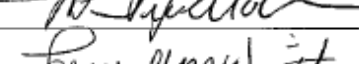
Role / Person	Rate per Hour	Total Allocated Hours	Cost
Web Design/Developer(s)	\$118.00	155.0	\$18,290.00
Totals:		155.0	\$18,290.00

Final Recommendation:

Proceed with Change Control Request..

F. Signatures

Governance Body:

Name/Title	Signature	Date
Thomas Howell / CEPI Director		3/10/15
Trina Anderson / CEPI Deputy-Director		3/2/15
Barry Tiedeman / CEPI Financial Information Specialist		2/23/15
Paul Bielawski / MI School Data Portal Delivery Manager		2/19/2015
Vern Westendorf / Workforce Development Agency – LDS Manager		3/16/2015
Greg Bodnar / DTMB Sr. Project Manager		3/16/2015
Joe Findlater / Dewpoint Account Executive		3/4/15
Laurel McDevitt / Dewpoint Project Manager		3/6/15

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
525 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 3
to
CONTRACT NO. 071B1300105
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
Dewpoint 1921 East Miller Road, Suite B Lansing, MI 48911	Joe Findlater	joe.findlater@dewpoint.com
	PHONE	VENDOR FEIN # (LAST FOUR DIGITS ONLY)
	517-881-49373	0595

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
PROGRAM MANAGER	DTMB	Glenn Gorton	517-241-2368	gortong@michigan.gov
CONTRACT ADMINISTRATOR	DTMB	Jarrold Barron	517-284-7026	Barronj1@michigan.gov

CONTRACT SUMMARY			
DESCRIPTION: Michigan Statewide Longitudinal Data System (MSLDS)			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
November 16, 2010	November 15, 2014	5 one year	November 15, 2015
PAYMENT TERMS	F.O.B.	SHIPPED TO	
N/A	N/A	N/A	
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			
N/A			

DESCRIPTION OF CHANGE NOTICE				
EXTEND CONTRACT EXPIRATION DATE	EXERCISE CONTRACT OPTION YEAR(S)	EXTENSION BEYOND CONTRACT OPTION YEARS	LENGTH OF OPTION/EXTENSION	EXPIRATION DATE AFTER CHANGE
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>		
CURRENT VALUE		VALUE/COST OF CHANGE NOTICE	ESTIMATED REVISED AGGREGATE CONTRACT VALUE	
\$8,327,374.83		\$108,560.00	\$8,435,934.83	

DESCRIPTION:

Effective March 12, 2015, this contract is amended pursuant to the attached Change Control Request to add \$108,560.00 for two additional Web Design/Developer(s) at the rate of \$118.00/hour, not to exceed 920 total person hours. These additional resources are permitted on a time and material basis pursuant to Contract Change Notice 2.

All other pricing, terms and conditions remain the same. All other pricing, terms and conditions remain the same. Per contractor and agency agreement and DTMB Procurement approval.

**State of Michigan
Michigan Statewide Longitudinal Data System
Change Control Request**

A. General Information

<i>Project ID/Acronym:</i>	MSLDS	<i>Date:</i>	01/15/2015
<i>Controlling Agency:</i>	CEPI/DTMB	<i>Modification Date:</i>	
<i>Prepared by:</i>	Greg Bodnar	<i>Control Number (From Control Log)</i>	201

B. Requestor Information

Proposed Change Description and References:

The requestor will provide information concerning the requested change along with any supporting documentation.

This change control request is a time and material change for an addition of up to 920.0 hours of Web designer/developer hours to address the initial Early Childhood/"Race to the Top" data availability on/through the MI School Data portal. This activity will be performed in conjunction with the ongoing Phase III - Michigan Statewide Longitudinal Data System Maintenance (Contract No. 071B13300105 / PO. 084N4304344).

The duration of work effort is a time period of February 1, 2015 through September 30, 2015.

This initial activity will address the definition, design and development of two (2) Early Childhood displays/reports.

These reports titles are:

1. Count of Children Receiving Early Childhood Programs and Services
2. Count of Kindergarten Students Receiving Early Childhood Programs and Services in the Prior School Year.

This Web designer/developer augmentation activity will be viewed as a Time and Material agreement, with the stipulation of a 'not to exceed' allocation of person-hours associated with this specific Early Childhood/"Race to the Top" activity.

Impact of Not Implementing Proposed Change:

Dewpoint would not be able to assist CEPI in continued maintenance and enhancement to the Michigan Statewide Longitudinal Data System and the MI School Data portal.

Alternatives:

Present a new RFP and engage a new resource provider.

C. Initial Review Results of the Change Request

Initial Review Date: 1/15/2015

Assigned to: Greg Bodnar

☒ Approve for Impact Analysis

☐ Reject

☐ Defer Until:

Reason:

D. Initial Impact Analysis

Baselines Affected: Continued maintenance and enhancement to the MSLDS and MI School Data portal.

Configuration Items Affected: Not applicable

Cost / Schedule Impact Analysis Required?



Yes
(below)



No

Impact on Cost: \$108,560.00

Impact on Schedule: Additional maintenance and enhancement activities for an eight (8) month period.

Impact on Resources: The Dewpoint staff augmentation will mentor and significantly assist the DTMB/CEPI existing staff.

Final Review Results: Proceed with change

Review Date: 1/15/2015

Classification:



HIGH



MEDIUM



LOW

E. Impact Analysis Results

Specific Requirements Definition:

This additional Web design/development activity is to be considered a Time and Material activity, with a stipulation of a "not to exceed" allocation of 920.0 person/role hours.

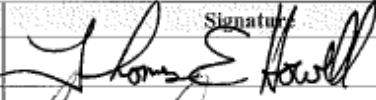




Role / Person	Rate per Hour	Total Allocated Hours	Cost
Web Design/Developer(s)	\$118.00	920.0	\$108,560.00
Totals:		920.0	\$108,560.00

Final Recommendation:

Proceed with Change Control Request..

F. Signatures

Governance Body:

Name/Title	Signature	Date
Thomas Howell / CEPI Director		2/4/15
Trina Anderson / CEPI Deputy-Director		2/4/15
Barry Tiedeman / CEPI Financial Information Specialist		2/4/15
Paul Bielawski / MI School Data Portal Delivery Manager		2/4/2015
Greg Bodnar / DTMB Sr. Project Manager		2/10/2015
Joe Findlater / Dewpoint Account Executive		2/10/2015
Laurel McDevitt / Dewpoint Project Manager		2/10/2015

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DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
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June 25, 2014

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NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
Dewpoint 1921 East Miller Road, Suite B Lansing, MI 48911	Joe Findlater	joe.findlater@dewpoint.com
	TELEPHONE	CONTRACTOR #, MAIL CODE
	517-881-49373	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR	DTMB	Glenn Gorton	517-241-2368	gortong@michigan.gov
BUYER	DTMB	Barb Suska	517-284-7026	Suskab2@michigan.gov

CONTRACT SUMMARY:			
DESCRIPTION: Michigan Statewide Longitudinal Data System (MSLDS)			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
November 16, 2010	November 15, 2014	5 one year	November 15, 2014
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A
ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MiDEAL PARTICIPANTS
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS:			
N/A			

DESCRIPTION OF CHANGE NOTICE:				
EXTEND CONTRACT EXPIRATION DATE	EXERCISE CONTRACT OPTION YEAR(S)	EXTENSION BEYOND CONTRACT OPTION YEARS	LENGTH OF OPTION/EXTENSION	EXPIRATION DATE AFTER CHANGE
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 year	November 15, 2015
VALUE/COST OF CHANGE NOTICE:		ESTIMATED REVISED AGGREGATE CONTRACT VALUE:		
\$1,600,000.00		\$8,327,374.83		
Effective immediately, this Contract is INCREASED \$1,600,000.00 and exercises the first option year. New Contract end date is November 15, 2015 and new Contract value is \$8,327,374.83. This is for Phase III maintenance and transition, per the attached mutually agreed upon vendor proposal. All other terms, conditions, pricing and specifications remain the same. Per vendor and agency agreement, the approval of DTMB Procurement and the approval of the State Administrative Board on June 24, 2014.				

MSLDS Optional Maintenance: Year 1

(July 1st, 2014- September 30th, 2015)

Addendum to Contract #071B1300105



Presented by:
Joe Findlater
May 29, 2014
517.881-4973
Joe.Findlater@dewpoint.com

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Table A: Staffing / Roles / Rates

Table B: Summary of the Project Costs

Executive Summary

This contract amendment outlines the approach and billing structure for Maintenance and Transition (Phase III) of the Michigan Statewide Longitudinal Data System Project. It is a supplement to the State of Michigan Contract # 071B1300105 and all associated contract amendments. It is understood by both Dewpoint and the State that the content of the aforementioned contract including, but not limited to the terms and conditions, also apply to Phase III.

As is noted in Article 1 – Statement of Work (SOW) of the State of Michigan Contract #071B1300105, *"The fixed price in this contract is only for the first phase of the MSLDS project. The State may choose to exercise contract change requests for additional work including but not limited to the definition and delivery of future project phases. At this time, the total project delivery period is not expected to exceed four years. The State may also choose to exercise additional optional maintenance years beyond this period."*

It has been determined that it is in the best interest of the State to position Phase III as a maintenance and transition phase. While Phase I and Phase II of this project were structured as fixed price/deliverables based agreements, effort associated with Optional Year 1 Maintenance (Phase III) will be provided on a time and material basis (using a fixed hourly rate). Dewpoint's primary role in Phase III will be to provide well qualified resources to augment the State's project team to assist with work required to maintain the SLDS and implement new functionality as required. This may include, but is not limited to, assistance with requirements definition and documentation, prioritization, consultation, design, development and testing of SLDS functionality.

Solution Overview

Phase III of the SLDS Project is a maintenance and transition phase. As is noted in the Contract #071B1300105 Statement of Work, Section H – Other Services, *“The State may choose to process Contract changes and/or exercise Contract options to deliver future project phases and or conduct maintenance activities.”*

In Phase III, Dewpoint will provide a team of individuals to complete the assigned work as required. These work assignments will be directed by the DTMB Sr. Project Manager, the CEPI Longitudinal Data Manager and the DTMB/CEPI Development Manager. Details related to the potential work to be performed are included later in the amendment. An hourly rate structure, will be used for all Dewpoint Team members, for all activities performed during the Phase III Maintenance and Transition. This hourly rate structure and the associated assumptions are included in the Pricing Methodology section of this contract amendment.

Statement of Work

Tasks and Deliverables

System Development Tasks and Deliverables

The tasks and deliverables pertaining to Phase III System Development will consist of the following system development activities:

- Requirements Definition and Documentation
- Design
- Development

As has been the case in Phases I and II, the Phase III Maintenance and Transition Phase work will follow the State of Michigan development methodologies and standards established in the previous project phases. Dewpoint will bring experience and expertise to assist the State with each System Development Task and Deliverable.

Requirements Definition and Documentation

As required, Dewpoint will provide the necessary resources to lead requirements definition and documentation sessions, as directed by the State. Requirements sessions should be conducted with the system owners and subject matter experts for any new or modified SLDS functionality delivered in Phase III. Depending on the type of change or new function, various types of Dewpoint resources will be recommended to lead and document the results of the requirements sessions. For instance, it is recommended that both a Sr. Business Analyst and DBA participate in requirements sessions for new SLDS Data Sources. Dewpoint will work with the State to determine the appropriate participants as new or enhanced functionality modifications are identified and the associated levels of complexity are determined.

Dewpoint will work with the State to create a formalized estimate approach to ensure consistency.

Design, Development, Testing, and Implementation

It is expected that Dewpoint will be directed to develop new and/or enhance existing SLDS functionality during Phase III of the SLDS project. To meet this objective, Dewpoint will perform certain Design, Development, Testing and Implementation based activities.

Pricing Methodology: Phase III

Under this contract amendment, maintenance/transition resources will be billed at an hourly rate per resource role. Dewpoint will work with the State to establish a staffing plan to satisfy the required staff augmentation levels. On a quarterly basis, Dewpoint will meet with the State project manager to validate future quarter staffing levels provided for under this contract vehicle.

Assumptions for Phase III approach and pricing

- 1) Rates are based on the State of Michigan published normal working schedule.
- 2) Effort will include maintenance to the State of Michigan Longitudinal Data System repository.
- 3) The Dewpoint Team will observe the published State of Michigan Holiday schedule.
- 4) The Dewpoint Team members will each have an expected resource hourly allocation of 162 hours per calendar month. Certain Dewpoint resources will be assigned a percentage of the full monthly resource allocation as determined by DTMB Sr. Project Manager. The pre-determined resource allocation percentages and specific Dewpoint resource role pricing are detailed in the attached *Table A: Staffing / Roles / Rates*. All related work activities performed by Dewpoint resources shall not exceed 40 hours per calendar week. Any expectations of a Dewpoint resource work-effort exceeding 40 hours per calendar week, must be pre-approved by the DTMB Sr. Project Manager.
- 5) The State of Michigan agrees to give one month notice to release resources from the project, unless there are suitable grounds for more immediate termination such as a security breach or extreme performance degradation. The DTMB Sr. Project Manager will escalate to the Dewpoint PMO if such a situation arises.
- 6) The State of Michigan will be responsible for the general management of the Phase III project. The Dewpoint team will be responsible for assisting the State in meeting their stated project objectives. Dewpoint may assist the State with project level deliverables including, but not limited to, requirements definition, documentation, design, development, testing or implementation.
- 7) Dewpoint will provide a single point of contact for all billing and contractual issues (including issue escalation, corporate oversight and general contract management).
- 8) Dewpoint shall substantially perform the tasks set forth by the State of Michigan. In the event Dewpoint fails to complete the tasks as required, the State may escalate the issue in writing to the Dewpoint single point of contact. Within five (5) business

days, Dewpoint will provide the State a written explanation of specific steps and named Dewpoint individuals who will rectify the situation.

- 9) The State of Michigan has the right to approve or deny any key staffing changes that are initiated by Dewpoint (other than those due to employee termination).

Table A: Staffing / Roles / Rates

Staffing Category	Definition	Hourly Rate	Contract Period Total Allocated Hours
Project Manager	<ul style="list-style-type: none"> Provides oversight, leadership, accountability and project management functions for the project. This project requires a project manager due to the level of complexity, degree of intricate detail and accountability to executive leadership. Provides strategic planning and management of the project while providing oversight for system development, which includes planning, organizing, communicating, consulting and serving as liaison with the client. Responsible for coordinating and leading the project team for the duration of the project while maintaining project records for review of the project. Ensures the project follows the appropriate SUITE and PMM practices. 	\$120	486
Systems Architect	<ul style="list-style-type: none"> Provides leadership to create and maintain the framework and implement the overall technology strategy. This will encompass tools and processes across all operating system platforms. Responsible for creating the physical database tables. Performs the physical database design, works with system administrators and uses data packages. Uses tuning tools to improve database performance. Develop the overall data architecture strategy of the system, ensuring reusability, integration, and optimization. Perform detailed data and requirements analysis and developing the dimensional data model. Ensure system addresses the State's business requirements and enforces rules and performs calculations efficiently and accurately as identified by the State. Work with the Project Manager to develop plans for the overall development of the system and ensure that the proper design documentation has been developed. Serve as technical subject matter expert on data warehousing methodology used on the project and tools used in the system's development. Manage the physical design of the system and all its component parts. Architect and document the ETL process from end-to-end including coordination of testing activities. Coordinate knowledge transfer and phase hand-off to State resources. 	\$164	729

Staffing Category	Definition	Hourly Rate	Contract Period Total Allocated Hours
Business Analyst	<ul style="list-style-type: none"> Gathers requirements using interviews, document analysis, requirements workshops, survey, site visits, business process descriptions, use cases, scenarios, tasks and/or workflow analysis. 	\$100	2,268
Technical Writer	<ul style="list-style-type: none"> Organizes material and complete writing assignments according to set standards regarding order, clarity, conciseness, style, and terminology. Maintains records and files of work and revisions. Works with SoM and team members to establish technical specifications and to determine subject material to be developed for publication. 	\$80	0
Database Administrator	<ul style="list-style-type: none"> Responsible for ensuring the availability and performance of the databases that support the systems. Works to ensure that the associated hardware resources allocated to the databases perform with high resilience and performance tuning. Responsible for troubleshooting and problem solving. Responsible for improvement and maintenance of the databases to include rollout and upgrades. May be responsible for setting up the database systems and making sure those systems operate efficiently. 	\$110	1,044
Configuration Management Expert	<ul style="list-style-type: none"> Plans and coordinates preparation of project documentation such as drawings and specifications. Work closely with development, QA and Operations to implement release processes. 	\$112	292
SAS Developer	<ul style="list-style-type: none"> Provides administration, maintenance and support for SAS software and supported infrastructure. Provides business user support and assistance. Provides testing and validation of SAS tools and applications in the project environment. Identifies, selects and designs efficient solutions to advance the project. Understands and complies with all of the standard policies and procedures that impact the project. 	\$125	4,374
Web Designer / Developer	<ul style="list-style-type: none"> Responsible for the development and design of major and minor web applications and components for internal and external users. Design, develop, test and deliver web site functionality as pre-determined by the system owners. 	\$118*	2,043

	<ul style="list-style-type: none">• Participation in all aspects of support and defect resolution.		
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* Denotes a new role not defined on Phase II rate card

Table B: Summary of the Project Cost

Resource/Role	Rate per Hour	Cost (\$)	<u>Comment</u> 7/1/2014 thru 9/30/2015
Project Manager	\$120	\$58,320.00	Average 32 hours per month - not to exceed 486 hours.
System Architect	\$164	\$119,556.00	Average 48 hours per month - not to exceed 729 hours.
Business Analyst	\$100	\$226,800.00	Average 162 hours per month - not to exceed 2,268 hours.
Technical Writer	\$80	\$0.00	N/A
Data Base Administrator	\$110	\$213,840.00	Average 162 hours per month - not to exceed 1,944 hours (12 month period).
Configuration Manager Expert	\$112	\$32,704.00	Average 19 hours per month - not to exceed 292 hours.
SAS Developer	\$125	\$546,750.00	Two Resources: (1) Average 162 hours per month (15 month period) (2) Average 162 hours per month (12 month period) Combined total - not to exceed 4,374 hours.
Web Designer / Developer(s)	\$118	\$347,274.00	Combined average 197 hours per month - combined total - not to exceed 2,943 hours.
SAS Architect / Support		\$50,000.00	Support from 7/1/2014 thru 9/30/2015 (15 month period).
SharePoint Hosting (50 Users)		\$4,756.00	Hosting service from 7/1/2014 thru 9/30/2015 (15 month period).
Total Project Cost		\$1,600,000.00	

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

August 17, 2011

CHANGE NOTICE NO.1
TO
CONTRACT NO. 071B13000105
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR Dewpoint 1921 East Miller Road, Suite B Lansing, MI 48911 Email: brian.dumont@dewpoint.com	TELEPHONE Brian Dumont (517) 316-2850
	CONTRACTOR NUMBER/MAIL CODE
	BUYER/CA (517) 335-4770 Tammi Hart
Contract Compliance Inspector: Ann Lindberg Michigan Statewide Longitudinal Data System (MSLDS)	
CONTRACT PERIOD: From: November 16, 2010 To: November 15, 2014	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE(S):

Effective immediately, this contract is hereby **INCREASED** by \$4,707,608.00.
Please also note that the buyer has been **CHANGED** to Tammi Hart. All other
terms, conditions, pricing and specifications remain the same.

AUTHORITY/REASON(S):

Per vendor and agency agreement, the approval of DTMB Purchasing Operations
and the approval of the State Administrative Board on August 16, 2011.

INCREASE: \$4,707,608.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$6,727,374.83

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET November 17, 2010
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

NOTICE
OF
CONTRACT NO. 071B13000105
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR Dewpoint 1921 East Miller Road, Suite B Lansing, MI 48911 Email: brian.dumont@dewpoint.com		TELEPHONE Brian Dumont (517) 316-2850
		CONTRACTOR NUMBER/MAIL CODE
		BUYER/CA (517) 241-0239 Jacque Kuch
Contract Compliance Inspector: Ann Lindberg Michigan Statewide Longitudinal Data System (MSLDS)		
CONTRACT PERIOD: From: November 16, 2010 To: November 15, 2014		
TERMS N/A	SHIPMENT N/A	
F.O.B. N/A	SHIPPED FROM N/A	
MINIMUM DELIVERY REQUIREMENTS N/A		
MISCELLANEOUS INFORMATION:		

TOTAL ESTIMATED CONTRACT VALUE: \$2,020,266.83

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CONTRACT NO. 071B13000105
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR Dewpoint 1921 East Miller Road, Suite B Lansing, MI 48911 Email: brian.dumont@dewpoint.com		TELEPHONE Brian Dumont (517) 316-2850
		CONTRACTOR NUMBER/MAIL CODE
		BUYER/CA (517) 241-0239 Jacque Kuch
Contract Compliance Inspector: Ann Lindberg Michigan Statewide Longitudinal Data System (MSLDS)		
CONTRACT PERIOD: From: November 16, 2010 To: November 15, 2014		
TERMS N/A	SHIPMENT N/A	
F.O.B. N/A	SHIPPED FROM N/A	
MINIMUM DELIVERY REQUIREMENTS N/A		
MISCELLANEOUS INFORMATION: The terms and conditions of this Contract are those of ITB #07110200166, this Contract Agreement and the vendor's quote dated August 6, 2010. In the event of any conflicts between the specifications, and terms and conditions, indicated by the State and those indicated by the vendor, those of the State take precedence. Estimated Contract Value: \$2,020,266.83		

FOR THE CONTRACTOR:

Dewpoint
Firm Name

Authorized Agent Signature

Authorized Agent (Print or Type)

Date

FOR THE STATE:

Signature
Jacque Kuch, Buyer

Name/Title
IT Division

Division

Date



**STATE OF MICHIGAN
Department of Technology Management and Budget (DTMB)
Purchasing Operations**

Contract #: 071B1300105

DTMB Agency Services/Center for Educational Performance and Information (CEPI)

Michigan Statewide Longitudinal Data System (MSLDS)

Buyer Name: **Jacque Kuch**
Telephone Number: **(517) 241-0239**
E-Mail Address: kuchj@michigan.gov



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APPENDICES (APPENDICES D, E AND G ARE INTENTIONALLY EXCLUDED)

- APPENDIX A – PRELIMINARY PROJECT PLAN
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- APPENDIX C – TECHNICAL REQUIREMENTS
- APPENDIX F – MSLDS REPORTING DEPENDENCIES
- APPENDIX H – COST TABLE TEMPLATE



DEFINITIONS

Days	Means calendar days unless otherwise specified.
24x7x365	Means 24 hours a day, seven days a week, and 365 days a year (including the 366th day in a leap year).
Additional Service	Means any Services/Deliverables within the scope of the Contract, but not specifically provided under any Statement of Work, that once added will result in the need to provide the Contractor with additional consideration.
Audit Period	See Section 2.110
Business Day	Whether capitalized or not, shall mean any day other than a Saturday, Sunday or State-recognized legal holiday (as identified in the Collective Bargaining Agreement for State employees) from 8:00am EST through 5:00pm EST unless otherwise stated.
Blanket Purchase Order	An alternate term for Contract as used in the States computer system.
Business Critical	Any function identified in any Statement of Work as Business Critical.
Chronic Failure	Defined in any applicable Service Level Agreements.
Deliverable	Physical goods and/or commodities as required or identified by a Statement of Work
DTMB	Michigan Department of Technology, Management and Budget
Environmentally preferable products	A product or service that has a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. Such products or services may include, but are not limited to, those that contain recycled content, minimize waste, conserve energy or water, and reduce the amount of toxics either disposed of or consumed.
Excusable Failure	See Section 2.244.
Hazardous material	Any material defined as hazardous under the latest version of federal Emergency Planning and Community Right-to-Know Act of 1986 (including revisions adopted during the term of the Contract).
Incident	Any interruption in Services.
ITB	A generic term used to describe an Invitation to Bid. The ITB serves as the document for transmitting the RFP to potential bidders
Key Personnel	Any Personnel designated in Article 1 as Key Personnel.
New Work	Any Services/Deliverables outside the scope of the Contract and not specifically provided under any Statement of Work, that once added will result in the need to provide the Contractor with additional consideration.
Ozone-depleting substance	Any substance the Environmental Protection Agency designates in 40 CFR part 82 as: (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or (2) Class II, including, but not limited to, hydro chlorofluorocarbons
Post-Consumer Waste	Any product generated by a business or consumer which has served its intended end use, and which has been separated or diverted from solid waste for the purpose of recycling into a usable commodity or product, and which does not include post-industrial waste.
Post-Industrial Waste	Industrial by-products that would otherwise go to disposal and wastes generated after completion of a manufacturing process, but do not include internally generated scrap commonly returned to industrial or manufacturing processes.
Recycling	The series of activities by which materials that are no longer useful to the generator are collected, sorted, processed, and converted into raw materials and used in the production of new products. This definition excludes the use of these materials as a fuel substitute or for energy production.
Deleted – Not Applicable	Section is not applicable or included in this RFP. This is used as a placeholder to maintain consistent numbering.
Reuse	Using a product or component of municipal solid waste in its original form more than once.
RFP	Request for Proposal designed to solicit proposals for services
Services	Any function performed for the benefit of the State.



Source reduction	Any practice that reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment prior to recycling, energy recovery, treatment, or disposal.
State Location	Any physical location where the State performs work. State Location may include state-owned, leased, or rented space.
SubContractor	A company Contractor delegates performance of a portion of the Services to, but does not include independent Contractors engaged by Contractor solely in a staff augmentation role.
Unauthorized Removal	Contractor's removal of Key Personnel without the prior written consent of the State.
Waste prevention	Source reduction and reuse, but not recycling.
Waste reduction and Pollution prevention	The practice of minimizing the generation of waste at the source and, when wastes cannot be prevented, utilizing environmentally sound on-site or off-site reuse and recycling. The term includes equipment or technology modifications, process or procedure modifications, product reformulation or redesign, and raw material substitutions. Waste treatment, control, management, and disposal are not considered pollution prevention, per the definitions under Part 143, Waste Minimization, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended.
Work in Progress	A Deliverable that has been partially prepared, but has not been presented to the State for Approval.
Work Product	Refers to any data compilations, reports, and other media, materials, or other objects or works of authorship created or produced by the Contractor as a result of an in furtherance of performing the services required by this Contract.
ADS	Analytical Data Store
AMAO	Annual Measurable Achievement Objectives
AMO	Annual Measurable Objective
ARRA	American Recovery and Reinvestment Act
AYP	Adequate Yearly Progress
CCD	Common Core of Data
CCSSO	Council of Chief State School Officers
CEPI	Center for Educational Performance and Information
CSPR	Consolidated State Performance Report
CTE	Career and Technical Education
CTEIS	Career and Technical Education Information System
D4SS	Data 4 Student Success
DCH	Department of Community Health
DELEG	Department of Energy Labor and Economic Growth
DMWG	Data Managers Working Group
DQC	Data Quality Campaign
DSAC	Decision Support Architecture Consortium
DSS	Decision Support Services
DTMB	Department of Technology Management and Budget
ECODIS	Economically Disadvantaged Student
EDEN	Education Data Exchange Network
EDS	Extended Directory Services
EEM	Education Entity Master
ELP	English Language Proficiency
ESEA	Elementary and Secondary Education Act
FERPA	Family Education Rights and Privacy Act
FID	Financial Information Database
FIPS	Federal Information Processing Standards
FTE	Full Time Equivalence
GFSA	Gun Free Schools Act of 1994
IDEA	Individuals with Disabilities Education Act



IEP	Individualized Education Program
ISD	Intermediate School District
LEA	Local Education Agency
LEP	Limited English Proficiency
MDE	Michigan Department of Education
MDTMB	Michigan Department of Technology, Management, and Budget
MEAP	Michigan Educational Assessment Program
MME	Michigan Merit Examination
MEP	Migrant Education Program
MEGS	Michigan Electronic Grants System
MSDS	Michigan Student Data System
MSLDS	Michigan Statewide Longitudinal Data System
NAEP	National Assessment of Educational Progress
NCLB	No Child Left Behind
NCES	National Center for Educational Statistics
ODS	Operational Data Store
PEPE	Primary Entity Providing Education
Perkins IV	Carl D. Perkins Career and Technical Education Improvement Act of 2006
PESC	Postsecondary Electronic Standards Council
PSA	Public School Academy
REP	Registry of Education Personnel
SEA	State Education Agency
SHEEO	State Higher Education Executive Officers
SID	School Infrastructure Database
SIF	Schools Interoperability Framework
SOM	State of Michigan
SRSD	Single Record Student Database
SWP	School-Wide Program
TAS	Targeted Assistance School
TIMSS	Trends in International Mathematics and Science Studies
UIC	Unique Identification Code
USDOE	United States Department of Education



Article 1 – Statement of Work (SOW)

1.001 PROJECT REQUEST

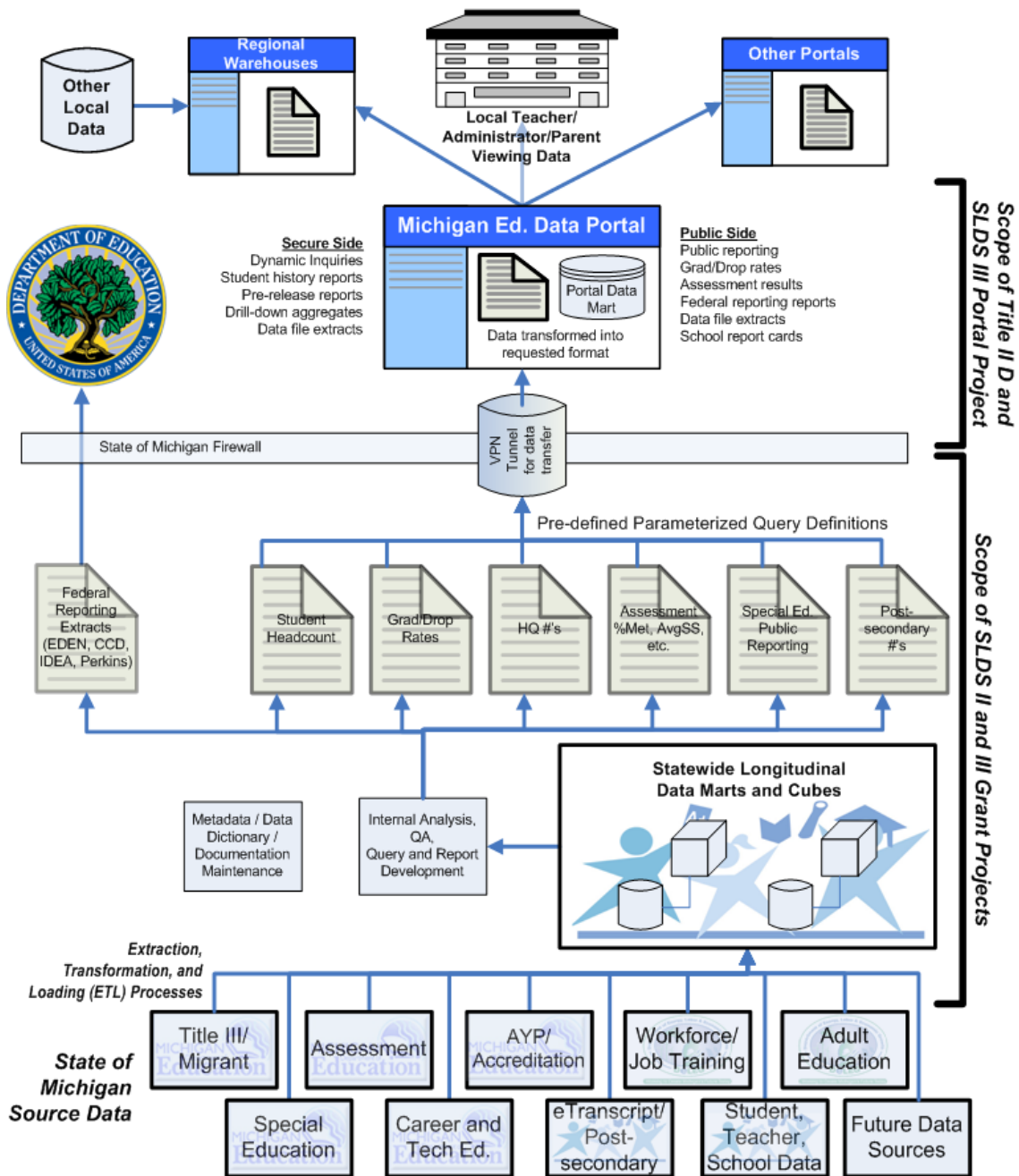
The State of Michigan (State), through the Michigan Department of Technology Management & Budget (DTMB) and the Center for Educational Performance and Information (CEPI), have issued this Request for Proposals (RFP) for the purpose of obtaining a state-of-the art Michigan Statewide Longitudinal Data System (MSLDS) and related services to enable the automated access to data and data management services as part of the State's Education Decision Support System (DSS) initiative. The State seeks an experienced Contractor to implement a system to perform:

- Design and development of analytical data store (MSLDS),
- Historical data extraction from various source systems,
- Transformation of this data in line with a metadata directory,
- Cleansing recommendations of said data – including the routing of error reports back to the appropriate source system owners.
- Loading of data into an analytical data store (MSLDS),
- Repeatable processes of above functions to apply to future data collections
- Provisioning of data analysis and querying services, and
- Provisioning of scheduled/standard and ad hoc reporting services as part of a larger data management and decision support effort.

Figure 1 on the next page shows an overall flow of data in the system being requested.



Figure 1: Michigan Statewide Longitudinal Data System



Version 1.1
10/26/2009
Center for Educational
Performance and Information



The State will have services begin in November 2010. The Phase I implementation must be completed by no later than **September 30, 2011**.

The fixed price in this contract is only for the first phase of the MSLDS project. The State may choose to exercise contract change requests for additional work including but not limited to the definition and delivery of future project phases. At this time, the total project delivery period is not expected to exceed four years. The State may also choose to exercise additional optional maintenance years beyond this period.

The Contractor will conduct a requirements review and validation of the Phase 1 detailed requirements as described in Section 1.104 Work and Deliverables and Appendices A and B. Phase 1 will establish the base system architecture and deliver the highest priority functions. Subsequent phases (contract change requests) will be added as required scope is further defined. The Contractor has provided, as outlined in this contract, a fixed-price bid for fully delivering Phase 1 of the SLDS project as described in this contract by no later than September 30, 2011. The MSLDS solution provided by the Contractor in this Phase 1 fixed price contract will enable future phases to be delivered as enhancements to the existing base Phase 1 architecture. No major system architectural changes will be necessary for future phases.

If applicable, once detailed requirements are defined for future phases, the selected Contractor will be expected to provide a fixed price bid for the work using the project change control process. If the State agrees, additional delivery contract options will be exercised via the project/contract change process. The State reserves the right to seek competitive quotes for the subsequent phases.

1.002 BACKGROUND

CEPI's mission is to become the single source for the most comprehensive, accurate and useful information about the performance of Michigan's PK-12 public schools, postsecondary institutions, and their students. To that end, the MSLDS project will provide the foundation for Michigan's connected education data sources.

Michigan received funding from the State Fiscal Stabilization Fund (SFSF) under assurances made by the Governor that the State will meet elements as defined in the America Competes Act (ACA). The Data Quality Campaign (DQC) lists 10 essential elements of a Statewide Longitudinal Data System. The ACA includes these 10 elements and added two more. Functionality to meet each of the 12 America Competes Act requirements must be included in the design of the system. These requirements are:

For Preschool through Grade 12 and Postsecondary Education:

1. An unique identifier for every student that does not permit a student to be individually identified (except as permitted by federal and state law);
2. The school enrollment history, demographic characteristics, and program participation record of every student;
3. Information on when a student enrolls, transfers, drops out, or graduates from a school;
4. The ability to share data from preschool through postsecondary education data systems and;
5. A system of auditing data for quality, validity, and reliability;

For Preschool through Grade 12 Education:

6. Students scores on tests required by the Elementary and Secondary Education Act;
7. Information on students who are not tested, by grade and subject;



8. A way to identify teachers and to match teachers to their students;
9. Information from students' transcripts, specifically courses taken and grades earned and;
10. Students scores on tests measuring whether they're ready for college;

For Postsecondary Education:

11. Data on students' transition to and success in college, including whether they enrolled in remedial courses;
12. Other data on whether K-12 students are prepared to succeed in college;

A portion of the funding for this project comes from U.S. Department of Education (USDOE) National Center for Education Statistics (NCES) Statewide Longitudinal Data Systems (SLDS) Grants awarded to Michigan. The grants require that all deliverables and work products developed as a part of this project be shared among the states in the LDS partnership and possibly other states. The system needs to align with the America Competes Act of 2007 provisions.

State and federal laws require Michigan's Pre K-12 public schools and postsecondary institutions as well as other educational entities to collect and report data about students, personnel and individual schools. CEPI coordinates the data collections with Intermediate School Districts (ISD), Local Education Agencies (LEA) and Public School Academies (PSA). State agencies, such as the Department of Education, the Department of Labor and Economic Growth, the Department of Treasury and others, provide data and data definitions that are required by state and federal laws. In addition to data collection, CEPI facilitates the development of reports for state program offices, public posting via their Web site, and the submission of federal reports via the U.S. Department of Education's Education Data Exchange Network (EDEN). Additional information pertaining to CEPI can be found at www.mi.gov/cepi.

Michigan has partnered with Docufide to implement an electronic transcript initiative throughout the state. The initiative allows school districts to transmit student transcripts (including the statewide student identifier) electronically to postsecondary institutions and to a transcript repository hosted at Docufide. Docufide also hosts a process by which postsecondary institutions can transmit student-level data to a data repository. At this time this data repository is the primary mechanism for collecting and reporting on postsecondary measures as defined by the America Competes Act. An expected Phase 2 project milestone will be to extract selected K-12 and postsecondary transcript data elements from the data repository to store and report from the State hosted MSLDS.

Fourteen systems of record have been identified that generate data that will initially feed the MSLDS. This Statement of Work provides basic information on those source systems to be included in the MSLDS project. The following systems will be the focus of Phase I of this project.

- The Michigan Student Data System (MSDS) collects individual-level student enrollment and demographics including information on program participation and teacher/student/course linking.
- The Office of Educational Assessment and Accountability (OEAA) databases include individual student-level and aggregate-level assessment data as well as building and district level accountability data. Data on students who were not tested are included in their system as well.
- The Education Entity Master (EEM) database is a directory of all education entities, or institutions, in the State of Michigan and many attributes about these entities.

Michigan has partnered with an Intermediate School District (ISD) who has been awarded a Title II Part D grant to host and maintain the Data 4 Student Success (D4SS) application. Expanded function of this application is under development as it becomes the security and navigational framework behind



the Michigan Education Data Portal. Michigan's portal will include public aggregate reporting and analyses, and continue appropriate and secure drill-down to individual student-level information for school administrators and teachers. As a framework for publishing new reports, the menu and content system will be flexible and allow for the rapid addition and maintenance of reports and functionalities. The portal will become a one-stop shop for the dissemination of Michigan education data. **The Contractor must partner with the ISD and their selected delivery vendors in producing publically available and secure reports to be delivered through this portal.** The system must be capable of interfacing with and providing data to external systems such as the Michigan Education Data Portal. Interface with these systems will consist of regular pre-defined data extracts from the MSLDS and transmission of these extracts to the external hosting facility. **The Contractor for the MSLDS project will also develop report templates to be delivered to the ISD who will publish them within the portal.** Among the new information to be added to the secured portion of the education portal will be data sets that link teachers to student information, allowing local districts to assess individual teacher impact on student performance and consider student growth factors in teacher and principal evaluation systems.

Data on students not tested on annual accountability tests will be included in the MSLDS. Michigan currently has an assessment roster system in which students who are eligible to be tested are identified and verified by staff at the local school districts. Modifications have been made to this system to identify students who are not tested and to request from the district a reason the student did not test. A data structure and process to extract these data and store them in the SLDS, matching this information to enrollment and program participation data, will be created as will reports at the individual and aggregate level. This will allow policymakers to determine if there are specific trends around certain districts or subgroups of students who do not take the assessments.

1.101 IN SCOPE

Phase 1 of the MSLDS project includes the delivery of an ETL solution including all extracts described as Phase 1 in Appendix F (89) and 20 additional reports (to be defined as part of Phase 1) to be posted on the Michigan Education Data Portal. At a high level, the phases of the MSLDS implementation are initially planned (subject to change) as follows:

- Project Planning as outlined within this contract
- Business Requirements
 - Review, validation and clarification of **provided** requirements
 - Phase 1 – Detailed requirements are complete based on the information known at the time of requirements definition. Prior to beginning the design phase, a review/refresh of requirements to clarify anything that may be unclear and update with more current information will be facilitated and documented by the Contractor.
 - Phase 2 – Detailed requirements are partially complete and should be considered as the overall MSLDS solution is architected. If the Phase 2 Option is exercised, the Contractor will work with CEPI and DTMB to complete the detailed requirements using the **project change control process** and provide a fixed price for the delivery of Phase 2.
 - Phase 3 – Detailed requirements are partially complete and should be considered as the overall MSLDS solution is architected. If the Phase 3 Option is exercised, the Contractor will work with CEPI to complete the detailed requirements using the **project change control process** and provide a fixed price for the delivery of Phase 3
- Data Repository , ETL, Report and Extract Design
- Data Repository , ETL, Report and Extract Development
 - Database development
 - Development of data store and foundational tables
 - Repeatable data extraction processes from the following systems:
 - Michigan Student Data System (MSDS)
 - Fall 2002 – Present



- Educational Entity Master (EEM)
 - 2002 - Present
- Office of Education Assessment and Accountability (OEAA) Databases
 - Michigan Educational Assessment Program (MEAP)
 - Fall 2005 - Present
 - MI-Access (alternate assessment program for students with significant disabilities)
 - Fall 2005 - Present
 - Michigan Merit Examination (MME) and MEAP High School Test
 - Spring 2005 - Present
 - English Language Proficiency Assessment (ELPA) and ELPA Screener
 - Spring 2006 - Present
 - Annual Yearly Progress (AYP)
 - 2003 – Present
- Transformation of data – including the routing of error reports back to the appropriate source system owners
- Loading of data into an analytical data store
- Design and perform quality assurance procedures and ensure processes meet requirements
- Update metadata repository to reflect movement and manipulation of data
 - Development of queries and stored procedures to create Phase 1 data extracts and reports (Appendix F).
- Data Repository , ETL, Report and Extract Implementation
 - ETL historical datasets into system
 - Testing processes against current data collections
 - Execute and publish reports and extracts
 - Metadata repository updates where necessary
- Training including procurement of SAS and methodology training for SOM personnel
- Knowledge Transfer/Transition
- Maintenance/Support
- Other Services

Following a system transition period at the end of each phase, the State expects to maintain and update the production MSLDS while future optional project development phases are in progress. The Contractor will be required to participate on a Change Board to review, discuss and ultimately agree on the best plan for implementing system changes that may impact previous or future phase development.

At a high level, the delivery of future phases involves the following:

Phase 2 (Contract Change Request(s) @ the discretion of the State)

- Complete requirements gathering efforts for Phase 2 systems
- Database development
- Repeatable data extraction processes from the following systems:
 - Docufide Michigan e-Transcripts Initiative Repositories (Postsecondary and high school data)
 - 2010 to Present
 - National Student Clearinghouse Data (Postsecondary data)
 - Registry of Educational Personnel (REP)
 - 2002 - Present
 - Financial Information Database (FID)
 - 2003 – Present
 - Michigan Compliance Information System (MI-CIS) – Special Education data



- Career and Technical Education Information System (CTEIS)
- Migrant Education Data System (MEDS)
- Transformation of data – including the routing of error reports back to the appropriate source system owners
- Loading of data into an analytical data store
- Design and perform quality assurance procedures and ensure processes meet requirements
- Update metadata repository to reflect movement and manipulation of data
- Development of queries and stored procedures to create Phase 2 data extracts and reports (Appendix F).

Phase 3 (Contract Change Request(s) @ the discretion of the State)

- Complete requirements gathering efforts for Phase 3 systems
- Database development
- Repeatable data extraction processes from the following systems:
 - School Infrastructure Database (SID)
 - Michigan Adult Education Reporting System (MAERS)
 - Michigan Electronic Grant System (MEGS)
 - Student Financial Assistance
 - Michigan WORKS!
 - Unemployment Insurance Database
- Transformation of data – including the routing of error reports back to the appropriate source system owners
- Loading of data into an analytical data store
- Design and perform quality assurance procedures and ensure processes meet requirements
- Update metadata repository to reflect movement and manipulation of data
- Development of queries and stored procedures to develop identified Phase I data extracts and reports (Appendix F).

Following a system transition period at the end of each phase, the State expects to maintain and update the production MSLDS while future optional project development phases are in progress. The Contractor will be required to participate on a Change Board to review, discuss and ultimately agree on the best plan for implementing system changes that may impact previous or future phase development, starting with Phase 2.

A more detailed description of the work and deliverables sought for this project is provided in Article 1, Section 1.104, Work and Deliverables.

1.102 OUT OF SCOPE

- System hardware procurement except as necessary for the Sharepoint project environment
- Hosting Services except as necessary for the Sharepoint project environment

1.103 ENVIRONMENT

The links below will provide information on the State's Enterprise IT policies, standards and procedures which includes security policy and procedures, IT strategic plan, eMichigan web development and the State Unified Information Technology Environment (SUITE).

Contractors are advised that the State has methods, policies, standards and procedures that have been developed over the years. Contractors are expected to provide proposals that conform to State IT policies and standards. All services and products provided as a result of this RFP must comply with all applicable State IT policies and standards in effect at the time the RFP is issued. The Contractor awarded the contract must request any exception to State IT policies and standards in accordance with DTMB processes. It will be the responsibility of the State to deny the exception request or to seek a policy or standards exception.



Contractor is required to review all applicable links provided below.

Enterprise IT Policies, Standards and Procedures:

<http://michigan.gov/itstrategicplan>

All software and hardware items provided by the Contractor must run on and be compatible with the DTMB Standard Information Technology Environment. Additional specific IT/platform requirements are included in the Technical Requirements section in **Appendix C**. Additionally, the State must be able to maintain software and other items produced as the result of the Contract. Therefore, non-standard development tools may not be used unless approved by DTMB. The Contractor must request, in writing, approval to use non-standard software development tools, providing justification for the requested change and all costs associated with any change. The State's Project Manager and DTMB must approve any tools, in writing, before use on any information technology project.

It is recognized that technology changes rapidly. The Contractor may request, in writing, a change in the standard environment, providing justification for the requested change and all costs associated with any change. Any changes must be approved, in writing, by the State's Project Manager and DTMB, before work may proceed based on the changed environment and any schedule delays associated with such a request will be absorbed by the Contractor at no additional cost to the State.

Enterprise IT Security Policy and Procedures:

<http://michigan.gov/itstrategicplan>

The State's security environment includes:

- LDAP/Active Directory for internal access to network.
- DTMB provided SQL Server 2008 security accounts.
- Secured Socket Layers.
- SecureID (State Security Standard for external network access and high risk Web systems)

See the links below for specifics on CEPI and Federal data access policies:

- CEPI Data Access and Management Policy
http://www.michigan.gov/documents/Data_Policy_50459_7.pdf
- Family Educational Rights and Privacy Act (FERPA)
<http://www2.ed.gov/policy/gen/guid/fpc/index.html>

IT Strategic Plan:

<http://michigan.gov/itstrategicplan>

IT eMichigan Web Development Standard Tools:

<http://michigan.gov/itstrategicplan>

The State Unified Information Technology Environment (SUITE):

Includes standards for project management, systems engineering, and associated forms and templates – must be followed:

<http://michigan.gov/itstrategicplan>

Agency Specific Technical Environment –

The State requires solutions that incorporate the existing infrastructure in which Michigan has already invested:

- Microsoft SQL Server 2008
- Microsoft SQL Server 2008 Reporting Services
- Microsoft SQL Server 2008 Analysis Services
- SAS Server 9.2



- SAS Enterprise Guide 4
- SAS Data Integration Studio
- SAS Enterprise Business Intelligence Suite

The current workplace technology for the CEPI environment includes:

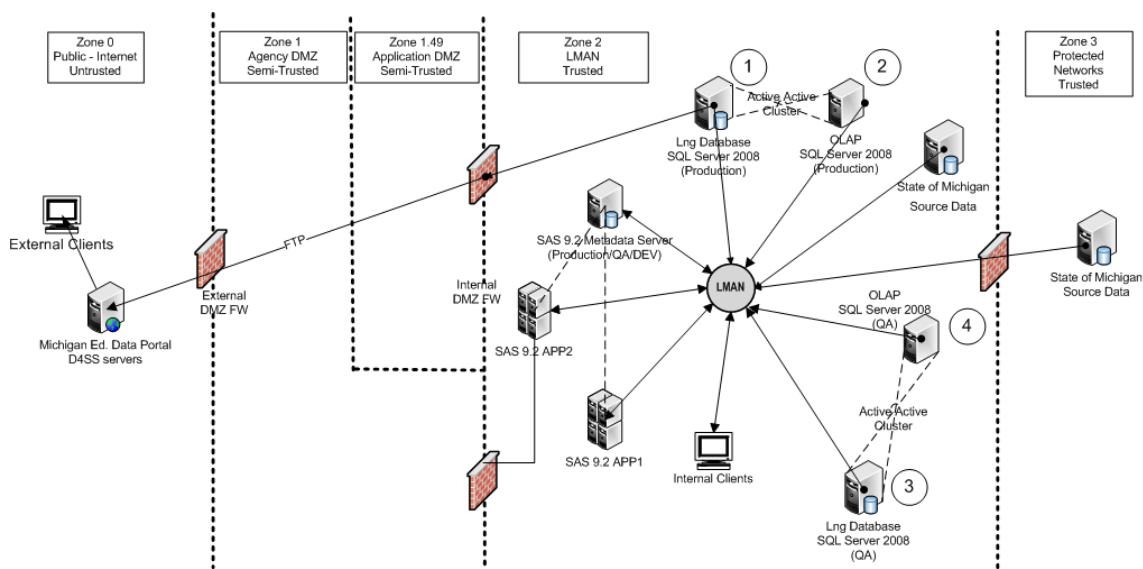
- Windows 2008 Server
- Internet Information Services 7.0
- SQL Server 2008 Enterprise Edition
- SAN (storage area network) technology for data storage
- NAS (network area storage) technology for file storage

The following software tools must be used if requested by the State:

- MS SQL Server 2008 – for database repository
- MS SQL Server Reporting Services – for creating report templates to be delivered to the portal environment
- SAS 9.2
- SAS Enterprise Guide – for data analysis, queries, and extract creation
- SAS Data Integration Studio – for extraction, transformation, and load process creation
- Microsoft SharePoint
- Microsoft Team Foundation Server 2010
- Microsoft Project
- Visio
- VB.Net (4.0 framework)
- C#.Net (4.0 framework)
- HTML 5
- JavaScript

Figure 2 below represents the current State infrastructure plan for this contract. The State infrastructure plan is subject to change based on State of Michigan business and/or technical needs.

Figure 2 – State Infrastructure Plan





1.104 WORK AND DELIVERABLE

The Contractor shall provide deliverables, services and staff, and otherwise do all things necessary or incidental to provide the functionality required for the Center for Educational and Performance Information business functions, in accordance with the requirements as set forth below and in this Contract.

The Phase 1 system must be installed and in operation no later than September 30, 2011.

The State reserves the right to change the name, acronym, and other identifying characteristics of the system anytime throughout the Phase 1 design phase without additional cost from the Contractor.

The Contractor must provide the following:

A. Project Planning

Project Planning covers those activities that require ongoing administrative oversight throughout all the MSLDS implementation processes, from initiation to completion of the project. Planning also includes a number of plans that will guide and govern the project from requirements gathering/verification through deployment and also for preparing for the eventual assumption of responsibilities by the SOM. Project Planning includes ongoing administrative activities and deliverables required in Sections 1.3 and 1.4, and from below. Throughout the lifecycle of the project, the Contractor will use SUITE/PMM documents where available and will propose modifications for the State Project Manager's approval where appropriate. Where SUITE/PMM templates and processes are not available, the Contractor will use its own templates and obtain the State Project Manager's approval of the content.

The Contractor's preliminary project plan included as an attachment to this contract will be used as a starting point for scheduling the SLDS project. The Contractor and the State will work together to mutually agree on a baselined project schedule, which will be submitted by the Contractor to the State within 15 working days from the commencement of this contract.

The RASIC chart included as an attachment to this contract will be used as a starting point for assigning resources to the SLDS project. The Contractor will review the RASIC with the State, update it to include State resource responsibilities (as identified by the State) and submit the revised RASIC to the State within 15 working days from the commencement of the project.

Electronic Project Library

The Contractor must configure, use and maintain an Electronic Project Library to serve as a foundation for defining, managing and monitoring the project and also act as a repository to retain and track project documentation. The Contractor must set up and administer a SharePoint 2007 (minimum) or 2010 instance using the Contractor's infrastructure that will be shared by both the Contractor and up to 30 State team members to be identified and modified at the State's discretion throughout the project lifecycle. The State is working to establish its own SharePoint infrastructure and the Contractor must be prepared to transition the repository, in full at any point in the project to the State's version of Sharepoint. If the transition is not done sooner, the Contractor must migrate all project information and documentation to a State SharePoint instance during the final system turnover phase at the conclusion of the project. The Contractor shall:

1. Ensure the library includes current and historical versions of the project documentation including but not limited to the Detailed Project Work Plan, Project Control and Project Management Plan, and all other project deliverable documents as dictated by the State of Michigan SUITE and PMM methodologies.
2. Maintain and provide administration for the library throughout the life of the contract, including during system operations and maintenance.



- a. Set up a Document Center library for all existing project documents and ensure that all new project documents are created in this library.
 - b. Update document properties on all library documents and manage permissions of users who should have access to the documents.
 - c. Modify the structure of the library as mutually agreed to by the State and Contractor and performing best practice backups as part of ongoing maintenance.
3. Train applicable State staff on the technology and use and administration of the SharePoint library. This training will provide State staff with all information required to efficiently use the library including but not limited to the knowledge to upload, maintain, search, and update documents stored in the SharePoint instance.
4. Provide a secure solution and describe the available security permission levels in detail to the State, provide a recommendation to the State on the best security approach to take, and obtain the State's approval on the approach.
 - a. Set up the SharePoint search engine to filter search results to allow users only to select documents they have permission to access.
 - b. Provide access to the SharePoint instance via a SSL VPN that requires proper identification and logon to access the SharePoint instance.
 - c. Set up and provide all parties appropriate permissions including folder-level and file-level access/restrictions according to standards agreed upon between the Contractor and the State including but not limited to features such as required check-out (which forces users to check out documents before they can be worked on and locks the document from other users until it is checked back in to the library) and major/minor document versioning (which systematically assigns new version numbers to checked out/in documents).
5. Index, as appropriate, all documents in the Electronic Project Library, for easy retrieval. As documents are added to the library, use the SharePoint search engine to store both the text and properties (metadata) for each document. The Contractor will also update the document properties if they are missing or incomplete. This will enable the easy retrieval of searched documents.
6. Upon delivery of the framework for the SharePoint Library, the Contractor must provide documentation on the use of the Library, to include:
 - a. A description of the process the Project Team will use to add new items and update items in the Electronic Project Library.
 - b. The management of historical records and retention period(s) and procedures for archiving documents.
 - c. A description of the Contractor's procedures for managing all documents added to the repository.
7. Transition the SharePoint library to a State of Michigan SharePoint instance. The timing of the transition will be at the State's discretion and no later than the final system turnover. The Contractor will use SharePoint to create a backup copy of the library located on the Contractor's infrastructure and restore the library to the State of Michigan's SharePoint instance. At the time of transition, the Contractor will ensure that all documents and structures are correctly transitioned to the State's version of Sharepoint which will at a minimum be 2007, but may be newer. Should SharePoint not be available at the time of final system turnover, the contractor will package all documents and structures in a mutually agreed format for transition to the State.



Quality Management Plan

The Contractor will perform Quality Assurance activities throughout the SLDS project lifecycle. All quality-related documentation including but not limited to reporting formats, Quality Management Plan, Issues Management Plan, Risk Management Plan, Change Management Plan and Initial Turnover Plan will be created by the Contractor and submitted for State approval within 20 days of the commencement of this contract. The Contractor will also conduct a Deliverable Expectation Planning phase where the Contractor will present the State with preliminary document drafts in advance of the due dates, to allow the State time to comment on the structure and content early in the process. Final deliverables will be evaluated against the expectations established during this process prior to the Structured Walk-throughs. Once the State agrees to the content and accepts deliverables, the Contractor's Project Manager will obtain signoffs (SEM 0187). The Contractor's project Manager will also update the SEM-0188 Project Metrics as required.

In order to ensure that the Contractor meets the State's requirements, the Contractor's Project Manager will update and maintain the SEM-401 Requirements Traceability Matrix (RTM) and SEM-402 Requirements Specification documents. The Contractor will ensure that each item in the RTM is unit and system tested.

The Contractor's Project Manager will recommend a Quality Policy to the State and upon the State's acceptance, use it as the foundation for how quality is measured throughout the project lifecycle. This policy will be used to establish quality standards and thresholds for which measurements and variances are tracked and reported to key State and Contractor stakeholders. The Quality Policy will outline objectives and responsibilities and will be the basis for the Quality Management Plan which will detail quality assurance guidelines, the processes for measuring the quality of the work implemented during the SLDS project and define the processes by which nonconformance issues can be tracked, managed, resolved, and routed for review or approval. The Quality Policy, Quality Management Plan (PMM-07), and the quality measures and metrics make up the Quality System.

The Quality Management Plan will describe the activities to be performed by the Contractor to ensure the State's requirements are met or exceeded. Managing project scope, understanding roles and responsibilities, conducting bi-weekly (at a minimum) status and planning meetings, collecting status report information including risk, issue and change management components are key elements of quality planning and will be managed by the Contractor's project manager.

The Contractor and State Project Managers will agree on the project escalation procedures within 15 working days of the commencement of the contract. These escalation procedures will be included in the Quality Management Plan.

At a minimum, the Contract's Quality Management Plan must address the following:

1. Quality Assurance Activities - Description of the quality assurance activities to be performed by the Contractor during the term of the contract.
2. Quality Control Activities - Description of the quality control activities to be performed on all deliverables before submission to State by the Contractor during the term of the Contract.
3. Quality Assurance Process and Procedures - Description of the Contractor's processes and procedures for conducting quality assurance activities, including the review and approval of all contract deliverables by the State.
4. Problem Reporting and Resolution - Including Integrated Issue Management.
5. Problem Escalation - Description of the process the Contractor will use to address problems and resolve conflicts that cannot be resolved by a single team or business area, or that require a decision from upper-level management.
6. Preliminary Schedule for Quality Assurance Activities - Including: Deliverable(s) to be Reviewed; Anticipated Date(s) for Review; Contractor Participant(s); and State Participant(s).



Using the project quality management processes, the Contractor will

- ensure the validity and accuracy of all deliverables
- verify the accuracy and completeness of test and data scenarios
- attest to the accuracy of test results and
- ensure functional and technical requirements are achieved

As part of the Quality Control activities, the Contractor will maintain project issue tracking logs to record and track the status of any definite and suspected issues. All open issues will be reviewed with the State on a regular basis and the Contractor will, prior to the implementation of the SLDS conduct a series of “Deploy/Delay” decision meetings to review all open issues and obtain agreement from the State on the issues that must be resolved prior to go-live.

As described later in Section 1.104 of this contract, the Contractor and State project team members will use various state-specified tools to report and track system issues or “bugs”.

Quality audits will be conducted by the Contractor at regular times mutually agreed to by the State and Contractor during the project lifecycle to determine whether project activities comply with organizational and project policies, processes and procedures as described in the Quality Management Plan. Results will be reported to the State Project Manager. The audits will identify and document lessons learned including best practices and gaps and recommend improvements. Root cause analysis will be used to determine underlying causes of issues and lead to the development of preventive actions.

Documentation and Standards Plan

The Contractor must have common standards used across all documentation. Where applicable, the formats for all plans, deliverables and any other documentation required for the project will adhere to the State of Michigan’s SUITE methodologies and templates. The Project Plan will utilize SUITE PMM-03 and other corresponding documents such as Risk Management Plan, PMM-06, Communications Plan, PMM-08, and Quality Plan, PMM-07, just to name a few. The Requirements Traceability Matrix, SEM-0401, will be used to document the business and technical requirements for the system. The SUITE template System Design Document, SEM-0604 and System Design Checklist, SEM-0605 will be used for any detailed system design or general system design documents. The SUITE template System Maintenance Plan, SEM-0931 will be utilized for the system maintenance plans associated with the implementation. The Contractor will use the Change Control sections within the SUITE documents to track all changes made to the project documentation throughout its lifecycle.

In addition, to the State standard SEM and PMM templates, the Contractor will custom tailor project documents for the SLDS implementation. During the initiation phase of the project, the Documents and Standards Plan will be created. Also during Deliverable Expectation Planning, the Contractor will work with the State to establish the content and structure acceptance criteria for the project deliverables. During this collaboration, the Contractor will modify or add to the State standard documentation to establish document templates specific for the project. The file naming convention will be Project Name_SUITE Document_Version #_Date ex. CEPI SLDS_SEM0401_V1_08022010

Deliverables:

The Documentation and Standards Plan outlines how the system, work flows, and business processes are documented. The contents of this plan must include, at a minimum:

1. Formats for plans, deliverables, and other documentation needed including file naming conventions and version control processes.



2. Formats for any system user manuals.
3. Formats for any Detailed System Design (DSD) or General System Design (GSD) documentation that is necessary.
4. Documentation for system maintenance plan.
5. References to SEM/SUITE/PMM documents where applicable.

B. Business Requirements

Requirements clarification and modification of requirements documentation

The Contractor must lead and facilitate a detailed review, validation, and update of the documented business and functional requirements with the State. Information to be reviewed, validated and updated includes logical system flows, data organization, system inputs and outputs, processing rules, and system operational characteristics from the user's point of view. The business or functional requirements describe what is required to meet the users' business needs. The Contractor must provide the following:

1. Facilitate face-to-face review sessions with key users identified (see sections 1.202 and 1.203) by CEPI
2. Confirm existing requirements and additional information contained in appendices A and B
3. Schedule meetings a minimum of 2 weeks prior to their commencement.

The Contractor will begin face to face review sessions with the key resources/subject matter experts identified by the State. These sessions must be facilitated by the Contractor and scheduled in cooperation with the State project support team members as described in section 1.202 of the RFP.

The Contractor will focus the requirements validation efforts first on the State's highest priority extracts as identified in the RASIC tab included in Appendix F. With this in mind, the Contractor will then take three days to group extracts by priority and data source, and create groupings of extract requirements to review

. Grouping the requisite reports in this manner will allow for focused follow on review sessions utilizing State expert resources more efficiently. The Contractor's Team will then begin to review the requirements in collaboration with the State in two parallel efforts. Requirements for reports allocated to the first group will be evaluated in parallel with requirements for the third group of reports. This evaluation of requirements is expected to last five days. Report requirement groups two and four will then follow and last an additional five days. Bifurcating the Contractor's team and grouping report requirements by data source allows the Contractor's team to review the requirements in parallel and make the most advantageous use of State resources.

The State will provide the detailed requirements for the 20 undefined reports prior to the delivery of the technical design documentation. The update of the existing requirements will take a total of five days once the requirements review is complete. Each set of the requirements will be updated in parallel with the updates being performed by the Contractor's staff tasked with performing the review. The updated documents and relationships captured in the SAS repository will be presented to the State and the Structured Walkthrough SEM-0187 will be scheduled in collaboration with the State Project Manager. The State will have five business days to review and collaborate on the updated requirements at which point the Requirements Signoff SEM-0189 will occur once all necessary updates are made. The Contractor's project manager will work with the State Project Manager(s) to complete the Metrics Collection –SEM-0188 and the requirements phase will be complete.

Deliverable(s)

1. The Contractor shall create or make the necessary updates to the following documents following the Contractor and validation with CEPI:



- SEM 401 and 402 (Requirements Traceability Matrix and Requirements Specification) to include all functional and technical requirements
- Appendix F – MSLDS Reporting Dependencies

The Contractor shall track and report the status of project requirements throughout the project lifecycle.

Acceptance Criteria

Once the CEPI and DTMB subject matter experts are in agreement that the documents have been appropriately updated, the DTMB and CEPI Project Managers will sign off on all updated documents at the conclusion of this phase. The State will have a minimum of five business days from the time the document updates are deemed fully complete to sign off. Additional high level acceptance criteria for Document Deliverables and Software Deliverables are listed in Section 1.501.

C. Technical Architecture/Design

The development of MSLDS requires the integration of several different technologies and the technical architecture design will establish the framework and vision of the system. The Contractor shall complete this milestone which includes the system and database design including:

1. Initial Data Analysis – Before any processes can be built, ETL written, cubes designed, or reports defined, the source data must be well understood as the business rules and structure of the source data change every year (or more frequently) in at least some small way.
2. Joint Application Design - Sessions with key users identified by CEPI shall be facilitated and the results shall be fully documented by the Contractor.
3. Dimensional Data Modeling – Models that support the business reporting and analytic needs shall be derived by the Contractor from examination of table granularity, associated dimensions, attributes, and numeric facts, as well as other relevant factors including the handling of time dimensions.
4. Physical Database Design
5. ETL Design
6. SAS Application Design – Configuration of the business metadata and tool infrastructure
7. Report and Data Extract Design
8. Technical specifications documentation
9. User Acceptance Test Cases and Plans

The Contractor's technology focus is to leverage what CEPI and DTMB already have in place to maximize the value of the State's existing investment in hardware, software and IT skill sets. The Contractor will use the available SAS and Microsoft products to deliver the MSLDS solution. The Contractor will also propose and upon the State's acceptance, expand the use of SharePoint to simplify management of permission for individual reports. The objective is to adapt the Contractor's approach and experience to meet the State's needs rather than trying to retrofit an existing solution to meet the State's requirements.

Each of the selected technologies will comply with the overall infrastructure plan summarized in figure 2 of the contract. The Contractor will deviate from this suggested architecture only where it adds value and where it is agreed to by the State.

The Contractor will provide source control and configuration management that is intentionally rigid and fully automated. Given the sensitive nature of the underlying data and the complexity of some of the analytics, environments must be controlled, consistent and predictable. This includes performing a detailed impact analysis of any structural changes in databases or cubes.



Every change to the system must be recoverable and repeatable, meaning when a change is made, it is possible to completely back out the change without further modification to the system. When a change is applied multiple times, each environment where it is applied changes in exactly the same way. Using these rigid controls, the Contractor will ensure the production environment remains as stable and as performance oriented as possible.

The core technology supporting the configuration management and build processes will be Team Foundation Server 2010. Every configurable item will be linked to work items defined for a release. Promotions will be controlled events and fully scripted using the build and deploy mechanisms provided by TFS. Every build will be fully recoverable meaning a system can be rolled back in case of error or if a new build proves to be unstable.

All completed development activities will be reviewed, tested, and put under configuration management by the Contractor. A review includes analyzing the activity for compliance with requirements as well as potential system impact. Any work product that can be identified as having a performance problem prior to promotion to test or production will be corrected up front. All decisions about the system must be evidence based. Decisions about design standards will be tested to ensure they are stable and perform well. If performance or operational issues arise, the Contractor will use evidence, which means analyzing queries, collecting monitoring data, and following through on evidence based decisions.

SECURITY

The Contractor shall integrate security into every level of the solution. The fundamental practice will be least privileges, meaning each user, administrator and developer will be granted the minimum privileges necessary to perform his or her job. Automation is the primary way in which this is accomplished. Scripting builds, deployments, and batch jobs means that actions can occur unattended, reducing error and making the granting of elevated rights an exception rather than the rule.

Data security and application security shall be achieved by granting individual access to reports, processes, and other actions within each environment based on CEPI's requirements. Server application security models will be used to protect data and other project assets.

Auditing will be enabled at every level of the application. Changes to configurable items will be captured through Team Foundation Server, changes at the database level will be tracked by the SQL Server 2008 Audit feature, while changes and actions performed by SAS products will be centrally logged. Automated privilege reports will be run against every environment showing rights and privileges by user, role and user group. These reports will be delivered by subscription to departmental managers and the Office of Enterprise Security. This constant audit will ensure inactive users are promptly disabled or purged, and that rights are correctly assigned to each user.

All communications, including connections to the database will make use of SSL encryption. This will be the default protocol for protecting data in motion. For data at rest, sensitive tables and columns will be encrypted by leveraging SQL Server's native encryption support.

Deliverable(s)

Technical Design Document

The Contractor must provide the following:

1. Translate requirements into a set of deliverables that can be used to drive and support the building of software artifacts; such as code, configuration data, and rules; with proper use of domain-related typing wherever possible. Design and document underlying architecture for handling time, slowly changing dimensions (EEM hierarchy), frequently changing values (program participations), linking of master records (students, schools, teachers, etc.), historical changes



- a. Restrictions based on the underlying system framework must be clearly identified and explained.
 - b. The design documents must be complete, concise and accurate.
 - c. Data sources must be documented so that structures can be quickly visually compared by looking at entity relationship diagram. The DDL generated from the data model will be used to compare structures currently documented in the Metadata repository.
 - d. Capture and clarify the business rules around the data source, table by source table, including how they relate.
 - e. By setting up security once in SharePoint, each new report added to a room inherits the security settings of the room as well as the organization of objects. The alternative is to perform these functions using Report Manager, which could be substantially more error prone and labor intensive. The Contractor must discuss these options with the State during the Requirements Validation stage and obtain the State's approval on the approach that will be used.
2. Construct a set of data quality reports jointly with subject matter experts from the State. These reports will assess by column, table, and data set:
 - a. Ranges of values for each column in the source data
 - b. Frequency of nulls and duplicate values
 - c. Frequency of data range violations such as birth dates that are impossible for school age children, etc
 - d. Data type violations, meaning things like invalid dates and numbers, which occurs when these values are typically stored as strings
 - e. Data format violations, meaning fields that do not comply with expected format mask such as leading zeros or alphanumeric only.
 - f. Frequency of orphaned detail records, such as assessment records without student records
3. Data analysis phase to collect data about data that makes up reference tables that are essential for avoiding the redundant implementation of complex business logic over and over again in extracts and reports. This metadata about the source data can make ongoing analysis much simpler for business users moving forward.

The output from the analysis phase must include, at a minimum:

 - a. Business rules defined for all of the source data tables, including year to year differences
 - b. Data quality issues by source data table
 - c. Metadata about the source column fields
4. Logical and Physical Data Model - The Contractor shall provide the State with the Logical and Physical Data Model. The Contractor shall use the State's suggested/preferred list of data elements to meet all specified reporting requirements and will be a normalized representation of the source data. The model must be efficient and flexible to allow future growth of the system as they will serve as fact tables for the analytical models developed later and will contain multiple years of data. Contractor shall :
 - a. Present a logical model for the business team to review
 - b. Present a physical model for DTMB and other participants to review
 - c. Physical target model will only go as far as needed to clearly identify the facts and dimensions to be used in the construction of the analytical data stores
5. Data Modeling Standards
 - a. The target data model must comply with very specific standards when it is constructed:
 - i. All source data will be converted to proper data types, meaning dates will be date time data types, integers will be integers, etc.
 - ii. The primary key on all tables will be a surrogate key labeled as "ID". Unless driven by an external business need, the ID column will be a SQL Server generated sequence number with no meaning other than to serve as a pointer to a record.



- iii. If a natural key should be enforced on a table, it will be implemented as a unique index of the targeted columns.
 - iv. The naming convention will comply with existing CEPI/DTMB departmental standards for all mapped data values. These standards will be propagated and approved by the state when applied to new objects for which there is no existing standard.
 - v. All mapped records will have five fields, which are not meant to replace audit data, but simply to facilitate debugging and data source identification:
 - 1. DataSource, which identifies the System and Table providing the data expressed as <system name>.<table name/FileName>
 - 2. CreationProcess, which identifies the name of the ETL process that created the record
 - 3. CreationDate, which identifies the data and time when the record was created
 - 4. UpdateProcess, the name of the last process which updated the record.
 - 5. UpdateDate, the date and time when the record was last updated.
6. Dimensional Model Design
- a. Analyze reporting requirements of data source
 - b. Design dimensional data model to meet reporting requirements
 - c. Provide physical design to store necessary fact and dimension data
 - d. Validate design's ability to meet reporting requirements
 - e. Design tables for each dimension and fact table
 - f. Strategy for managing changes to dimension attributes. The strategy should minimally address but should not be limited to the following situations:
 - i. Adding a fact to an existing fact table
 - ii. Adding a dimension to an existing fact table
 - iii. Adding an attribute to an existing dimension
 - iv. Increasing the granularity of existing fact and dimension tables
7. ETL Specification Plan
- Time spent analyzing source data, properly identifying business rules, and developing up front data cleansing processes dramatically reduces development effort and improves overall system quality. With this in mind, the value of reports, extracts and queries is limited by the quality of the data derived from the source systems.

The Contractor shall employ the following core activities in the development of the ETL for the MSLDS:

- 1. Collecting the business rules for each data set, and identifying how these rules change for each school year or addition to the larger data set.
- 2. Identifying data quality issues, including duplicate records, data type variations, orphaned child records, and other business rule violations.
- 3. Reconciling the source data against the business requirements to ensure all the source data elements are brought over.
- 4. Properly recording the metadata for the source data systems.
- 5. Developing a unified data model where data is normalized and all individual components of a data set are merged into one common structure.
- 6. Building SAS based ETL processes to cleanse the data and load it into the normalized and unified relational model.

The resulting output of the ETL process is the foundation for every other work product in the system. The Contractor must ensure that this process is done correctly to enable the rest of the MSLDS project to be correct.



The Contractor shall establish a unified data model that is acceptable to the State to be used as the basis for longitudinal analysis. This model will merge all years of data into a common structure which includes, but is not limited to establishing one set of tables for the MEAP assessment data, where results are tagged with a school year, but the row structure is fixed in each table regardless of the school year.

The Contractor shall apply appropriate normalization. When source data is normalized across years or collection cycles, it is then when all of the varying business rules make themselves apparent. Educational policy, federal and state law and assessments change every year. These changes impact the source data. The ETL processes must reflect these differences and the data model must accommodate variations as required.

The ETL processes and data model must accommodate incremental data loads for future data without requiring architectural changes. The Contractor fully understands that the State cannot predict the future changes and will build the unified model with change in mind. The Contractor shall provide the right normalization to allow for the easy addition of new “types” of records such as a new testing subject, or a new program, both of which may be represented as new columns in the source tables. The State and the Contractor understand that truly new data will require column additions and rules about what to set for previous years’ data for which the data item did not exist which the contractor must accommodate. The Contractor shall identify when to normalize and how to structure the database for change resulting in minimal structural changes moving forward. For ETL, one process for each year’s worth of data creates a repeatable incremental process. The Contractor will provide ETL processes that focus on one set at a time, deleting any residual data from past runs and ensuring that data from another year’s or collection cycle remains undisturbed.

The ETL processes and data model must be set up by the contractor to support incremental data loads for future data without starting from scratch. The unified model must be built with change in mind since we cannot predict what next year’s changes will be in the data at the time we build the model for the last five years.. Truly new data will require column additions and rules about what to set for previous years’ data for which the data item did not exist. However, identifying when to normalize and structure the database for change will minimize structural changes moving forward. ETL processes will focus on one set at a time, deleting any residual data from past runs and ensuring that data from another year or collection cycle remains undisturbed.

The ETL must allow data loading and must be both automated and user initiated. The processes must be designed and developed to be repeatable processes so they may be executed against future data collections from these systems with minimal changes to the processes. The Contractor’s solution must minimally include the documentation of the following elements:

- a. Source-to-target mappings including but not limited to:
 - i. Table information
 1. Ensure table names conform to naming standards
 2. Specify display names for main views users will access
 3. Describe the table for business users
 4. Describe the table for CEPI/DTMB technical users
 5. Identify if table is fact, dimension, metadata, or staging
 6. Specify source tables from tables with descriptions of the transformation
 - ii. Column information
 1. Ensure table names conform to naming standards
 2. Specify display name, business description, and technical description
 3. Specify each column’s data type, length, and precision



4. Specify how to handle a changed value for each dimension attribute using the slowly changing dimensions technique
5. Specify the source system, table, and column for each target column – include a brief description of any transformation to the column's data
6. Specify whether NULL values are permitted for the column, and a default value if NULL values are not permitted
7. Specify whether the column is part of a multi-level hierarchy or drilldown path, such as day to month to quarter to year. If so, provide an appropriate name to that hierarchy.
8. Specify additional columns that may be required by user access tools.
- b. Physical design decisions
- c. Data cleansing strategy and process including but not limited to:
 - i. Column Property Enforcement - incoming data contains expected values
 1. Null values are not present if required
 2. Numeric values are outside a set range
 3. Column lengths are as expected,(UIC's have 10 digits)
 4. Spelling of values are correct.
 - i. Structure Enforcement - The relationship of columns to each other
 1. Primary Keys are set up properly
 2. Foreign Keys are properly constructed
 3. Implicit and explicit hierarchies are enforced.
 4. Parent - Child relationships are created and enforced.
- d. Data Rule Enforcement – Data conforms to business rules discovered during data requirements gathering.
 - i. All students have an exit status of “Continuing Student” or Exit Status = 19
 1. Value Rule Enforcement - Aggregate values of data pulled are reasonable or predicted.
 - i. 2008 Graduation Rates deviate from 2007 Graduation Rates by 85%
- e. Every ETL process will be re-runnable, meaning it must be built to identify records it might have previously loaded and delete them.
- f. All ETL processes must log process initiation and completion times so a run time log is kept.
- g. Exception handling - A system-wide database that records all instances of exceptions. Fields to store include but are not limited to:
 1. Subject or exception name
 2. Job Name
 3. Exception Condition
 4. Severity
 5. Action Taken
 6. Operator
 7. Outcome
- h. During the run, all exceptions or data issues must be logged.
- i. Execution details must be captured such as whether the run was automated or manually initiated completed successfully, etc.
- j. Strategy and process for extracting from each source system which include but are not limited to:



1. Identify data source candidates that fulfills business objectives
2. Analyze source systems for data quality, completeness and the ability to fulfill the business need
 - a. Any anomalies detected must be documented and corrected before it is loaded into the data warehouse
3. Document and review with CEPI the data lineage and business rules of all report requirements:
4. Create the logical data map of the data warehouse. It includes, but is not limited to, the following:
 - a. Target table name
 - b. Target column name
 - c. Table type
 - d. Slowly Changing Dimension types
 - e. Source databases
 - f. Source table names
 - g. Source column names
 - h. Transformations
5. Validate all calculations and formulas:
 - a. Review existing documentation
 - b. Visit with end users (data stewards) and confirm all calculations specified in the data lineage when documentation is not available
- k Initial standards applied to ETL processes moving forward:
 1. All ETL processes will have a unique name, which will identify its business purpose and domain. The naming convention will be approved by the State early in the project.
 2. All ETL processes will be initiated against data tables, and not files.
 3. Any files will be loaded into a staging area for processing using the SQL Bulk Copy Program (BCP).
 4. Data will be extracted directly from the source systems whenever possible. If not, then it will be copied and staged in another SQL Server database for processing.
 5. All ETL processes must have the capacity to be automated and re-runnable without modification if no business rule changes occur.
- l Phases for developing the ETL process will be:
 1. Loading of fixed and annually defined reference data and the application metadata
 2. Loading the organizational information (EEM)
 3. Extract parent records from the de-normalized source data for student and assessment data
 4. Loading the detail records
 5. Additional steps and intermediate tables may be required to address the data quality issues identified in the data analysis step
- m During the requirements phase, it might emerge that the assessment data sets or student related data should be loaded in a particular order to facilitate pipelining of work. If so, then the task for building out the normalized target database may overlap with analytic work. Pipelining and overlapping of tasks will be used whenever possible.
- n Linking of parent and child records will be accomplished during the ETL data mapping and data cleansing process.
- o Orphaned records will be cleansed from the system, and every record in the unified relational data store will have strictly enforced foreign keys to ensure all natural foreign key relationships are honored.
- p The impact analysis of a structural change will be analyzed using SAS Data Integration Studio native impact analysis tool and the searchable impact analysis tool that the project will be building out as part of the configuration management plan.
- q Historical and incremental load strategies
- r Archival strategy – Process to remove detail data from database at appropriate intervals.



- s. Data quality tracking - keeping accurate records of the types of data-quality problems that are discovered. These include but are not limited to tracking:
 - i. Data Profiling - Metadata that includes
 - a. Schema Definitions
 - b. Business Objects
 - c. Domains
 - d. Data Sources
 - e. Table Definitions
 - f. Data Rules
 - g. Value Rules
 - h. Synonyms
 - i. The Contractor shall produce and update technical documentation for the system.
 - ii. Final versions of these documents are due before implementation as well as at interim time periods as agreed upon by the Contractor and the State.
 - iii. One electronic version and one hardcopy of the technical documentation shall be provided to the State initially, and as updates are made.

8. OLAP / Analysis Services database design

The Contractor understands that the unified data model is not the final step in preparing the data for use in reports, queries, and extracts. It is only the clean foundation from which other data stores can be built. The underlying goal of the MSLDS is to perform data analysis activities across the source data. A well indexed and structured relational model must meet the performance requirements for many of these activities, but it cannot duplicate the performance of data stores with pre-computed aggregates nor emulate the querying simplicity inherent in many dimensional models. The Contractor shall build derived data stores.

Since relational data does function so well for so many purposes, it will be the default approach unless there are clear reasons to go further. The Contractor will evaluate the State's data and where there are large numbers of derived values or derived values across a varying hierarchy will use an OLAP service server as part of the technical solution. The Contractor will use the following guidelines to identify when to build data marts:

Each analytical data store or cube will have the following driving characteristics behind it:

1. It contains aggregations that would be difficult or expensive to produce on request.
2. It contains measures or derived values with very complicated formulas that are too expensive to run on the fly.
3. It contains aggregations, measures, and other derived values that are accessed frequently, so pre-computing greatly simplifies analysis tasks.
4. It contains data organized in ways that would be too difficult to emulate in normal query writing against relational data stores, such as hierarchical relationships not explicit in the relational table structures and multi-dimensional queries.
5. It will be mapped directly to reporting, extract, or querying requirements, meaning designs will not be extended for completeness unless there is a defined business purpose behind the design.
6. It contains data structures that when browsable by users, eliminate a great deal of technical query writing, making the cube or analytical data store very labor saving.



Each of these cases is driven by clear business needs, meaning reporting, extracts, or analysis. Arbitrary standards around completeness or modeling principles will never be part of the decision process for when to create derived or analytical data. Instead, required functionality is the only decision criteria that must be applied.

- a. Analysis services databases should be capable of providing the maximum number of specified measures required for federal reporting while providing the ability to view these measures by, at a minimum, the number of dimensions required for federal reporting.
- b. Must be capable of combining measures so that they may share multiple dimensions to allow more flexible ad-hoc reporting of measures across dimensions that may not be required for federal report, but helpful for other queries, if desired.
- c. As part of the requirements activity, the contractor shall categorize the reports, extracts and queries by the source data required for these activities and the State's prioritization of the extract, report, or query.
- d. Each analytical data store or cube must have one or more of the following driving characteristics:
 - i. Contains aggregations that would be difficult or expensive to produce on request.
 - ii. Contains measures or derived values with complicated formulas that are too complex to run on an adhoc basis..
 - iii. Contains aggregations, measures, and other derived values that are accessed frequently, so pre-computing greatly simplifies analysis tasks.
 - iv. Contains data organized in ways that would be too difficult to emulate with SQL against relational data stores, such as hierarchical relationships not explicit in the relational table structures and some multi-dimensional queries.
 - v. Will be mapped directly to reporting, extract, or querying requirements, meaning cube designs will not be extended for completeness unless there is a defined business purpose behind the design.
 - vi. Contains data structures that when browsable by users, eliminate a great deal of technical query writing, making the cube or analytical data store very labor saving.
- e. The number and structure of the analytical data stores/cubes will be determined during the design phase after requirements have been clarified.
- f. All Multidimensional data models will be represented logically for conceptual review.
- g. The conceptual model will ensure that the correct business questions are being addressed in the cube, whether for reporting, extracts, or ad hoc inquiries. The conceptual model will fully demonstrate relationships between elements of the cube so that there are no ambiguities in the design
- h. From the conceptual model, a detailed design will be constructed.
- i. Each segment of a cube will be presented in a star or snowflake relational schema for a review of the physical design.
- j. A relational ERD will be supplemented with written design documentation to ensure the cube meets business needs.
- k. The supplemental documentation will identify metadata and other aspects of the OLAP model that are not part of the relational model.
- l. The ETL processes will address data typing up front. Data types within the OLAP cubes will preserve the relational data types wherever possible.
- m. Relationships will be established up front in the ETL processes so that the relationship of fact data to time dimensions is unambiguous when an OLAP cube is designed. Specific structures will be kept discrete and will be standardized wherever possible.
- n. Handling Slowly Changing Dimensions - The project team will examine each slowly changing dimension situation and select the approach that applies best to the analysis, reporting, and extract needs of the State. Slowly changing dimensions will be represented in different ways in different data marts depending on the situation and as agreed to by the Contractor and the State. Overwrite the data with updates when a value



changes if no historical record is required. If a historical accounting is required, then a surrogate key will be used so that new data and old data are linked to the correct version of a record. Restructuring of dimensions with a historical account of changes may be required in the most complex cases.

- o. All logical and physical models must be reviewed for correctness following the process outlined in the project manage portion of the proposal.
- p. Snapshots of the OLAP model will be included with design documentation to ensure that the requirements and data elements in the source and target data are covered.
- q. After a cube is developed and reviewed, it will be deployed and tested. The DBA must review the cube for performance reasons before deployment to ensure there are no Cartesian products or other relationships that could bring down the source or target server.
- r. When a database/cube is to be promoted to test or production, the deployment is scripted in advance and deployed from Team Foundation Server.

9. Queries and reports

The Contractor understands that reporting and extracts are some of the primary output functions of the MSLDS. Currently, reporting and extracts are extremely labor and resource intensive for CEPI and DTMB. The Contractor shall create a consistent set of source data structures. Through the strategic use of analytical data, the CEPI and DTMB effort required to produce reports and extracts will be dramatically reduced and performance will be greatly improved. Accuracy of results will be improved by incorporating the business logic for calculating highly used measures into the OLAP service so the rules will be consistent across users and uses.

The Contractor shall provide structures from the unified source database up to the analytical data stores based on the data needs of reports, extracts, and queries. Derived values shall be pre-computed, data will be optimized for particular queries, and multi-year data shall be standardized. Consequently, statewide and cohort based analysis will be much simpler to implement moving forward.

The Contractor, upon acceptance of this method by the State, will deploy standardized reports strictly through SharePoint. For long running reports that result in an output file rather than a “runnable” report, users will be notified as soon as a report file is uploaded to the SharePoint page by subscribing to changes on the page. Also, when a link is updated or a notice is created, all the room participants will be notified. By setting up security once in SharePoint, each new report added to a room inherits the security settings of the room as well as the organization of objects. The alternative is to perform these functions using Report Manager, which could be substantially more error prone and labor intensive. The Contractor must discuss these options with the State during the Requirements Validation stage and obtain the State’s approval on the approach that will be used.

The Contractor shall provide report templates with consistent data structures. The Contractor will also develop Report Models, which are similar to templates in that they present a simplified data model which can be used across multiple reports, greatly reducing the development effort in producing new or ad hoc reports.

For extracts, the primary tool the Contractor will use is SAS Enterprise Guide. Producing output files for the EDEN reports which have very complex business rules will require a tool as robust and as sophisticated as Enterprise Guide. For trivial extracts based off an existing report, SAS may be bypassed in favor of simply publishing the results of a report in a different format upon acceptance by the State. Like reporting, the simplified aggregate data structures and consistency of data structures will make extracts much less labor intensive and provide consistent results across multiple extracts and reports.



- a. The Contractor must build queries and reports against data marts and cubes to meet defined reporting requirements for the reports and extracts listed as Phase I in Appendix F.
 - b. Definition, design and development of up to 20 additional parameterized reports to be published in the Michigan Education Data Portal that incorporate and combine only the measures and dimensions already defined as Phase I measures.
 - c. Defined extracts are listed in Appendix F
 - d. Two tools will be the primary means through which queries can be built, stored and reused: Query Builder and SAS Enterprise Guide.
 - e. SAS projects generating extracts will have inline comments supporting query creation and execution
 - f. Report definitions will be written as Microsoft SQL Reporting Services reports with parameters selecting at a minimum the time period of the data and entities represented.
10. Data Update Screens
- a. If the ability to modify data manually outside of a scripted process is required, ASP.NET applications will be developed by the Contractor. The fields to be modified would exclude fields obtained from external source systems. These web applications will authenticate against the State's active directory store, and record a full audit trail of every change made to the system. Auditing of changes will be handled through the existing database audit function.

Metadata Directory Plan

The Contractor must provide and maintain a Metadata Directory and Plan based on the following:

1. Prior to development the State will procure a metadata repository solution to manage metadata for the MSLDS.
2. Based on current source systems and reporting requirements the contractor shall populate the State's repository with metadata.
3. The Contractor shall export the current content and compare it to what has been documented in the source data entity relationship diagram and the business rules implicit in the data. When the Metadata repository has been updated, pre-ETL activities will be complete.
4. Upon the development of ETL processes and the data model, the existing metadata repository shall be adjusted and maintained by the Contractor until the phase/system is turned over to the State.
5. Documentation of the processes to update and maintain the repository is to be provided by the Contractor.
6. All of the metadata processes will go through two reviews. The first review will be with the Contractor's SAS architect. This person will confirm that the proposed Metadata Directory management plan is feasible, robust, and accurate. Then the Contractor will review the plan again with DTMB and CEPI staff. Once the tentative plan has been approved, the Contractor will also do a proof of concept as soon as possible to identify any potential issues with the approach. All issues shall be reported by the Contractor to the State.
7. The contents of the repository will be exported, checked into Team Foundation Server, and deployed with a defined version of the MSLDS system by the Contractor.
8. Separate repositories on the SAS server will be used for each environment: one for development, another for test, and third for production. Any additional environments that may evolve out of the system will be given a new repository.
9. The contents of the Metadata directory will be updated by reverse engineering a new table or database then importing the structures into the development directory. The updated repository will then be exported, and the resulting export will be used to update the version in Team Foundation Server. The updated Metadata will be promoted as part of the build process.



10. Updates to Metadata Directory will be treated as part of the design process for new work items. Any changes to data structures, business rules, permissions, or any other data stored in the repository must be immediately recorded in the Metadata Directory.

User Acceptance Test (UAT) Cases

The Contractor must provide the following:

1. The Contractor must develop the test plans for User Acceptance Testing to include expected results.
2. The user acceptance test cases must include data edits and data validation criteria.
3. User acceptance test cases must include not only complete functional coverage, but also boundary and negative testing plans.
4. The Contractor will develop tests plans and test cases for User Acceptance Testing utilizing the SEM process and the current version of the SoM Testing Process Manual.
5. The following planning and executing templates will form the basis for the plan on what will be tested and how the testing will be administered:
 - a. The Test Plan (SEM-0602)
 - b. Test Type Approach and Report (SEM-0603)
 - c. Test Case (SEM-0606 or equivalent)
 - d. Defect Tracking Log (SEM-0186 or equivalent)
6. During the requirements phase the existing requirements will be reviewed, evaluated and transposed into the Requirements Specification – SEM-0402 by the Contractor.
7. The requirements shall be recorded and tracked in a requirements traceability matrix (SEM-0401) by the Contractor to ensure that for each requirement there is a test case (or test cases).
8. Each test case defined by the Contractor will contain:
 - a. A high level description
 - b. The steps required
 - c. The setup required
 - d. Security roles
 - e. Expected outcomes
9. Where appropriate, the test cases will include boundary testing to ensure that the functionality works on the high and low end of input values and negative testing to ensure the system remains stable given inappropriate input values.
10. The test plan will support the generation of metrics to accurately report on the user acceptance testing phase.
11. The binary pass/fail results of each test case will be reported to the Contractor's Project Manager using the tool/methodology documented in the test plan.
12. The Contractor's Project Manager will then report statistics on user acceptance testing cyclically as documented in the test plan.

Capacity Plan

The Contractor, in cooperation with DTMB, CEPI, and MDE, must provide and maintain a Capacity Plan document to include:

1. Planning and sizing estimates for all environments, including:
 - i. Expected storage requirements,
 - ii. Storage growth rates,
 - iii. Network bandwidth,
 - iv. Backup media consumption,
 - v. Anticipated load,
 - vi. Expected maintenance activities and,
 - vii. Expected personnel resources.
2. Ongoing updates to the plan shall be made throughout the project after each phase at a minimum by the Contractor.



3. The capacity plan will be updated by the Contractor whenever new data is loaded into the system or a new object such as an additional cube is created.
4. During the first stages of analyzing the source systems, data set sizes will be measured as well as annual growth by the Contractor.
5. As the unified source database is designed and built, even better estimates will be provided by the Contractor for storage utilization.
6. As cubes are built, a storage plan will be developed by the Contractor for the analytic data stores
7. A metric collection plan will be established by the Contractor with regular reports on current performance and expected growth in resource consumption.
8. A Vantage dashboard will be established for the critical servers in the MSLDS project. The Contractor will continually check CPU, memory, network and I/O utilization.
9. As servers become progressively busier during development and testing, a working model will be established by the Contractor to attempt to predict when or if servers will run out of a physical resource.
10. Comprehensive load testing performed by the Contractor will be scheduled frequently and after each substantial increase in functionality.
11. Capacity issues that require changes in hardware will be identified by the Contractor in three categories:
 - a. Emergency - when there is a sudden increase in server utilization. This is typically introduced when a new data load is applied to the system or new functionality is rolled out. The first action should be to tune the application. However, server upgrades probably have a legitimate business case in this level.
 - b. Near term - a predictive indicator based on a recent trend. Performance tuning may address this trend, but it is usually a sign a system is being used more heavily.
 - c. Long term - is based on an identified trend that may or may not hold up over time. However, if a server has consistently had some performance issues, and the impact of tuning is reduced at each intervention, then it is likely that the long term trend is valid.
12. Capacity planning and performance testing will begin almost immediately after project initiation to ensure that issues are identified as soon as possible.

Configuration Plan

The Contractor must provide a Configuration Management (CM) Plan and conduct Configuration Management activities:

1. Describing how configurations for all environments should be managed.
2. Describing how configurations will be verified and promoted.
3. The State uses Team Foundation Server 2010 as its standard software configuration/repository tool and the Contractor will be required to use this tool. Anything checked in to the production environment must be managed and controlled by DTMB. This includes such things as source code, master configuration files, scripts for software upgrades, and other CM utilities.
4. The MSLDS joint project team will maintain a strict promotion process for all configurable items so that no production or user acceptance testing systems will be affected by an inadvertent deployment of code, scripts, SAS processes, or other work product that has not been marked as ready for production.
5. Integration testing will be where impact analysis is performed so that all dependent configurable items are properly identified and modified as needed.
6. Components will be unit tested, reviewed by development/technical leads, and then marked as ready for testing.
7. Items deployed in this environment will be marked as "ready for production" when they have been successfully tested by end users.
8. When new objects are added or existing objects are updated, an incremental approach will be used wherever possible



9. Any work item which fails testing will have the work item returned to In Development
10. Statuses used will be adjusted and approved by DTMB and CEPI prior to implementation
11. Since the system is so database dependent, it is vital that the project develop the concept of a configuration, which will include but not be limited to:
 - a. Changes to application code
 - b. Configuration data and files
 - c. DDL change scripts
 - d. DML reference data change scripts
 - e. Data migration scripts for changed structures
 - f. Repository information needed for workflows and ETL mappings
 - g. Deployment scripts for OLAP databases
 - h. RDL scripts for SQL Reporting Services
 - i. Data source files
 - j. Build and process automation scripts
 - k. Software and operating system upgrades including patches and new versions
12. The build will be practiced and debugged in development by the Contractor and State staff before being verified in test and then applied in production by State staff.
13. Before any item can be promoted or changed, the impact of its changes must be measured against all other objects which could be potentially impacted.
14. The Contractor must keep a strict list of schema changes and identify all the reports, ETL processes, and analysis services projects that depend on that schema change.
15. Promotions to production will be handled using a fully recoverable scheme, meaning all servers, databases, and applications dependent on items deployed in the build will be backed up prior to any single change, including repositories.
16. All builds to test and production will be gated; meaning all work items and code items will be built and verified automatically. If any of the gated tests failed and the State team decides the errors are unrecoverable, the source code will be rolled back to the current release and the database will be automatically restored to ensure all schema and related data changes have been rolled back.
17. The impact of a build failure must be assessed by CEPI and DTMB to determine whether a full recovery and rollback is required.
18. All portions of the build will be managed through Team Foundation Server. Manual intervention will be limited to failures and administrative tasks that are not possible to automate.

Installation

The Contractor must assist DTMB with all installations on State environments. In the Installation Plan, the Contractor must:

1. Describe what is necessary to install the system and integrate with all source and integrated systems.
2. Fully document the initial installation plan and all revisions so the process can be repeated by the State technical staff.
3. Ensure staff, provided by the Contractor, work closely with the State to ensure appropriate knowledge transfer to State staff for the ongoing maintenance and support of the system following conclusion of the contract.
4. Include a rollout strategy and detailed plan.
5. Update the installation plan for patches, upgrades, and changes in configuration settings to address specific issues.
6. Include the full documentation for configuration settings in the operations manual.
7. Perform a tool inventory for each project member, including the role the individual will play on the project and what tools are missing.
8. Include action items out of the first draft documentation effort which minimally should include:
 - a. Any pending upgrades or patches, and a schedule for applying these changes



- b. Any configuration settings that were incorrect, including what they were changed to
 - c. A version inventory of all installed server programs
 - d. A personnel inventory of project specific desktop tools
 - e. A recommended product stack by project role, including all the packages needed by each individual in a particular role
 - f. A recommended purchasing schedule for any missing software components that require licenses or media
- 9. Assign tools to roles after the project starts with involvement from the State team
- 10. Update the first draft when the initial server upgrades have been tested on at least one server. Final draft will be completed by the contractor within 20 business days after each installation.
- 11. Provide a monthly status update for the installation plan. The Contractor will poll all server administrators for any configuration changes, patches, etc., and all project staff members for desktop tools updates and new tools for performing specific project functions.
- 12. Obtain approval of the format for the installation plan from CEPI and DTMB after project initiation.

Test Plan

The Contractor must provide a detailed approach to Unit Testing, System Integration Testing, User Acceptance Testing, and Performance/Load Testing. The Test Plan Deliverable, at a minimum, shall contain the following:

- 1. Description of testing approach.
- 2. Selection of test cases or processes.
- 3. Resource allocations from the State and the Contractor. There will be no more than 2.5 State FTEs (spread over approximately 5-6 people for testing).
- 4. Schedule.
- 5. Validation of test results.
- 6. Corrective action approach. The State uses both Team Foundation Server 2010 and Bug Tracker tools to track changes, bugs and enhancements. The specific ways in which each tool will be used during the testing and maintenance phases will be decided upon jointly between the Contractor and the State.

The test plan and corresponding schedule will set a target timeline for the State's testing activities. The schedule should be developed with the assumption that there will be no more than 2.5 FTEs for UAT. The State will not be held accountable to complete testing within a specific time period if one or more of the following events occur:

- The Contractor underestimates the effort required to test
 - The Contractor has a product that contains bugs that "block" or prevent the State from continuing to test functionality for more than a 24-hour period.
 - The Contractor delivers a low quality (does not meet the business requirements) product for UAT.
- 7. The Contractor will leverage the State of Michigan Software Engineering Methodology (SEM) and the Team Foundation Server 2010 and Bug Tracker implementations in place at the State.
- 8. In the Initiating Phase of the project the Contractor will deliver to the State both the detailed project plan and the test plan.
- 9. The Contractor's development resources and technical experts will be completely available to the Contractor's Business Analysts who are working with the State resources to execute the test cases. The Contractor's Project Manager will also be able to direct free capacity from these resources to advance the project as appropriate during this phase.
- 10. The requirements reviewed and updated as part of the Requirements Phase of the project will be carried throughout the project in the Requirements Specification – SEM -0402.
- 11. The Contractor will track all project requirements in the Requirements Traceability Matrix – SEM -401, or equivalent tool as approved by the State.



12. During the creation of the test Plan, the Contractor will work with the State to integrate the State's Team Foundation Server into the overall project methodology. Team Foundation Server will be included into the Test Plan and project as a facility to provide data collection, reporting, and project tracking.
13. Items such as application area, iteration, assignee, reported by, history, file attachments, and other attributes will be collected, assigned and tracked by the Contractor as part of testing.
14. The Test Plan will clarify the assignment of work items by type whether it be a bug, a task, a quality of service assessment or a scenario.
15. The Contractor will work with the State to understand the agencies testing culture, tools and abilities and further define the Test Plan accordingly

Turnover Plan - This Plan is a critical component for successful completion of the project. The plan must reflect that DTMB and CEPI staff will be mentored and coached on the system architecture and functions by the Contractor throughout the system development lifecycle. Therefore, a good deal of system turnover and knowledge transfer will take place throughout the project. Only final turnover activities and documentation will be delivered and reviewed after the implementation of the final phase of the project.

1. The initial Turnover Plan will be created by the Contractor in the Initiation Phase of the project within the first 20 days of contract execution.
2. The Contractor will work with the State to document the possible turnover over of systems, processes and maintenance of the system.
3. The Contractor will include a comprehensive schedule, a complete scope of the intended turnover including activities, responsibilities, processes and configurable items in the turnover plan.
4. The Contractor will work with the State to develop a Training Plan.
5. The Turnover Plan created by the Contractor, will detail the schedule, the activities, and the assigned resources responsible for both the mentoring and the reception of knowledge. Major milestones in the Turnover Plan will be included in the Project Plan and the quality plan will be updated by the Contractor to ensure the turnover activities are achieving the proper levels of comprehension.
6. The final turnover activities will be delivered by the Contractor and reviewed by the State within 10 business days after the stage exit approval for production implementation.

Acceptance Criteria

Once the CEPI and DTMB subject matter experts are in agreement that the documents have been appropriately updated, the DTMB and CEPI Project Managers will sign off on all updated documents at the conclusion of this phase. The State will have a minimum of five business days from the time the document updates are deemed fully complete to sign off. Additional high level acceptance criteria for Document Deliverables and Software Deliverables are listed in Section 1.501.

D. Development and Testing

The development of MSLDS includes the following milestones:

1. Construction of database tables, indexes, ETL processes, test cases, reports, and data extracts
2. Development of user acceptance test cases
3. Test system to validate that all requirements have been met
4. Test system to validate it operates efficiently and within performance testing requirements
5. Test for quality assurance and system integration
6. Support user acceptance testing
7. Prepare user, system, and operations documentation

**Deliverable(s)****Source Code and Artifacts**

1. The Contractor will have sole responsibility for developing the SLDS solution and delivering the source code and related artifacts to the State.
2. The Contractor shall test all of the resulting artifacts.

Testing and Test Results

1. As system components are developed, the Contractor shall provide comprehensive testing to validate functionality and performance. The Contractor shall conduct Unit Testing, System Integration Testing, and Performance/Load Testing in accordance with the Test Plan in the Quality Assurance (QA) Testing environment. The Contractor will support all User Acceptance Testing activities including, but not limited to test plan development, UAT kickoff sessions for testers, coaching testers through the UAT process, general support, and issue resolution.
 - i. The State will provide a QA environment where ETL processes and queries can be tested before deployment into the production environment. The Contractor must be available from 8:00 AM until 5:00 PM. The State may need to perform maintenance or upgrade activities to the environment from time to time. The State will inform the Contractor of such activities as far in advance as possible.
 - ii. The Contractor shall resolve all defects and perform all other technical support required to successfully complete this testing.
 - iii. The Contractor shall conduct a walk-through of the testing process and the test results to enhance State understanding and to facilitate the State approval process, including a review of performance metrics and general "lessons learned" from all testing participants.
 - iv. The Contractor shall coordinate with the DTMB QA lead to schedule and conduct performance/load testing without interfering with other project and operational activities.
2. The Contractor must test all system functions prior to turning the system over to the State for User Acceptance Testing. Testing shall at a minimum include:
 - a. Unit and System Integration Testing of ETL Processes:
 - i. Scope, or aspect of the process tested
 1. Accuracy of extracted data
 2. Transformation meets business requirements
 3. Load successfully completed
 - ii. Method for selecting data to be tested
 - iii. Test cases
 - iv. Results
 - v. System errors identified
 - vi. Corrective action and ongoing maintenance requirements
 - vii. For processes that involve constructing data, meaning the ETL processes and building out OLAP cubes, source to target validations will be performed. The types of aggregate validations will be determined in advance with the developer and a subject matter expert. The particular queries should then be included with the unit test plan for a particular ETL process.
 - viii. Test cases must be constructed by the Contractor from a sampling of source data where the expected target data is manually determined from the business rules and transformations to describe an initial state and a target state for the test data. The sampling methodology will vary by data set, and will require approval by subject matter experts from CEPI and DTMB. Samples should minimally include:



1. Data from each year or collection cycle from the data set to be tested.
 2. A variety of records with similar and different characteristics
 3. Enough variety so that every business rule and transformation is exercised against the test data set
- ix. For OLAP cubes, each fact, dimension, measure, and aggregation will be verified by the Contractor through a cube specific sampling methodology. A sample of cells will be selected from the cube and forward engineered from the source data. If the queries against the source data do not reproduce values in the cell, then the cube will have to be updated again with a corrected definition or rebuilt by the Contractor.
 - x. The test cases will validate that the load successfully completes and that the data was accurately extracted.
 - xi. Unsatisfactory results will be corrected and the module will be included in a configuration per the Configuration Plan to be rebuilt by the Contractor.
 - xii. Test cases completed and test results will be forwarded to the Contractor's Project Manager for inclusion in the Test Report and for validation against the Quality Plan.
- b. Testing of Query/Extracts:
- i. Scope, or aspect of the query or extract tested
 - ii. Method for selecting cases
 - iii. Test cases
 - iv. Results and implications for overall system operation
 - v. Corrective action and ongoing maintenance requirements
 - vi. Testing of Query/Extracts will include test cases which validate the query or extract tested.
 - vii. Unsatisfactory results will be corrected by the Contractor and the module will be included in a configuration per the Configuration Plan.
 - viii. Test cases completed and test results will be forwarded to the Contractor's Project Manager for inclusion in the Test Report and for validation against the Quality Plan.
- c. Performance Testing
- i. Provide performance testing covering ETL process performance. ETL processes for each source data system should take no more than five hours to complete, and preferably less time. Performance is a consideration when designing each process. Timing with other ETL processes as well as system usage needs must be considered and modeled in the testing. The Contractor must submit the proposed cases to the State prior to the testing. The Contractor will perform a minimum of four performance tests throughout the development and testing cycle for each process and provide test results to the State. Initial performance and load tests will be conducted and known issues will be resolved prior to turning over the system to the State for User Acceptance Testing (UAT). The Contractor will repeat load testing at the conclusion of UAT. The Contractor will have a minimum three-week period to conduct final load tests and resolve associated issues.
 - ii. Testing user performance of the system during ETL and query or extraction of data while system is under high user load (30 concurrent users accessing any combination of queries and reports). Query response time should take no longer than one minute to return results. Other queries returning more than one million records should take no more than 30 minutes to execute. The Contractor will perform a minimum of four performance tests throughout the testing cycle for each phase and provide the test results to the State. Initial performance tests will be conducted and known performance issues will be resolved prior to turning over the system to the State for User Acceptance Testing (UAT). The Contractor will repeat performance testing until the system performs in an acceptable manner during and at the conclusion of UAT. The Contractor will have a minimum three week period to conduct final performance tests and resolve associated issues.



1. The Contractor must demonstrate a design with performance in mind, for instance, focusing on appropriately balancing denormalization for system performance and normalization to eliminate redundant data; proper use of indices; and techniques to optimize data loading, queries, report generation, batch processing and all other aspects of the system. Reports running against tables with millions of records and computing very complex statistics could take hours. With that in mind, the Contractor will supply a solution to this problem when the response time cannot be hours. This would include log-based materialized views, a delta-update schema, etc.
 2. The Contractor must also work as a consultant to the State and evaluate performance impacts associated with system requirements and propose other more efficient alternatives if the impacts are deemed unacceptable.
 - iii. Performance Testing will be performed in a QA environment the State will make available during normal business hours. If operationally feasible, the production environment may also be used for performance testing, as determined by the State.
 - iv. During the Modeling Phase of the proposed plan the Contractor shall create an ETL Specification Plan which will consider the impacts of system load and the combined effect of concurrently running multiple ETL processes.
 - v. Defects will be corrected in the QA/Development environment before UAT and rebuilt by the Contractor according to the Configuration Management Plan.
- d. User Acceptance Testing
- i. The Contractor shall schedule, coordinate, monitor, and manage all User Acceptance Testing (UAT) activities. The Contractor will be responsible for providing twice-weekly metrics reports throughout the duration of UAT. Test case definitions include cases that demonstrate ETL process accuracy and cases that demonstrate that defined query specifications have been met. Minimally, the metrics will include:
 1. The number of test cases completed by each tester and functional category, total completed, and percent complete
 2. The number of test cases that passed during the first pass
 3. The number of test cases that did not pass during the first pass
 4. The root cause of the issue for all test cases that did not pass the first time. Root cause categories may include but are not limited to code bug, user training issue (working as it should), deployment issue, etc.
 5. The number of outstanding bugs and their respective statuses (e.g. New, In progress, In SIT, In UAT, etc.)
 6. The number and which bugs planned for the next release to the QA environment
 - ii. The State is responsible for providing end users (from State and local agencies) and subject matter experts to perform the user acceptance testing. The Contractor should assume the State will provide no more than 2.5 FTEs at any given time, for scheduling purposes.
 - iii. Users participating in UAT are expected to sign off on the test results at the completion of UAT, providing their recommendation to the State Project Managers for formal approval and readiness for production.
 - iv. State testers and other identified testers will communicate test results during UAT testing. If results are successful, they will provide their signoff by marking the test case as 'Passed'.
 - v. The Contractor shall provide support for the duration of UAT.
 - vi. This support must include both business and technical assistance.
 - vii. The testing process will include the ability to provide for a complete test a student test cycle.
 - viii. The Contractor shall support the UAT by:



1. Monitoring system performance and conducting necessary performance tests throughout the UAT period (the last being after all UAT is complete and signed off). A minimum of three weeks must be built into the schedule to accomplish the final performance test and bug resolution prior to the production implementation.
2. Investigating why data was not processed
3. Monitoring computer resource usage
4. Participating in problem review meetings
5. Investigating problems and identifying potential problems
6. Answering user questions about the system
7. Tracking problem reports
8. Resolving system issues
9. Investigating and ensuring user access to the system in the UAT environment
10. Generally helping the users execute tests and review results
11. Organizing and facilitating a series of "deploy/delay" meetings where the following will be covered:
 - a. factors for making the decision whether to move the system to production will be discussed and finalized
 - b. the status of the UAT effort will be reviewed (including all testing metrics)
 - c. the status and priority of all open bugs will be discussed to determine whether the bugs are required to be resolved prior to the production release
 - d. the Contractor's plan (including schedule) for resolving any UAT issues deemed unnecessary for the production release
- ix. The Contractor shall correct all defects discovered during UAT in a timely manner by following normal system development procedures - modifying the appropriate configuration items in the appropriate development environment, unit and integration testing the change, promoting the configuration item to the testing environment, quality assurance testing the change, and promoting the change to the UAT environment. Minimally, all UAT problems prioritized as critical will be resolved prior to the production launch. UAT problems prioritized as high will also be resolved prior to the production launch unless otherwise agreed to by the State. If agreed, all remaining High items will be resolved within two weeks after launch. While the State's preference would be to resolve all issues prior to launch, some medium and low priority system issues may be resolved post-production on a schedule reasonable and acceptable to the State.
- x. Promotions to UAT shall occur on a regularly scheduled basis, as agreed to by the State unless it is an emergency situation (e.g., UAT on one or more system components cannot continue until problem is resolved).
- xi. The Contractor must be ready to provide procedures and tools for tracking, reporting, and correcting deficiencies as required. The Contractor will use the State's tools, if available.
- xii. The Contractor's Project Manager(s) will work with the CEPI QA Lead to schedule State User Acceptance Testing resources.
- xiii. The Contractor's Project Manager(s) will work with the State to review the planned test scenarios and schedule the appropriate testing resources.
- xiv. The Contractor's technical and business resources assigned to the User Acceptance Test phase will triage test cases which failed and assist in defining the problem.
- xv. Defects with configurable items will be corrected in a timely manner in the QA/Development environment, included in a configuration per the Configuration Plan and built through the configuration process.
- xvi. Promotions to UAT shall occur on a regularly scheduled basis, as agreed to by the State unless it is an emergency situation. Emergency builds will be approved by the State Project Manager(s) prior to their execution.
- xvii. There will be no high severity defects outstanding two weeks after the system is put into production.
- xviii. In order to support the User Acceptance Test Phase, the Contractor will continue to



have its team available and on site. The business analysts and technical resources will participate indirectly in the UAT process by providing support and performing parallel tasks. The Contractor's team will interact directly with the end user testers, answering questions, explaining scenarios, explaining performance metrics, providing orientation sessions and ensuring end user access to the modules to be tested.

- xix. The end user load placed on the system will enable the Contractor's Technical resources to further performance testing by monitoring system resources during testing.
- xx. The Contractor's Team will also participate in UAT by performing defect analysis, impact analysis and root cause analysis.
- xxi. The Contractor's Project Manager(s) in conjunction with the Contractor's technical resources will then make recommendations on the resolution of open defects, consulting with the State and evaluating performance impacts associated with system requirements.
- xxii. The Contractor will conclude the testing process with a walk-through of the testing process and the test results to enhance State understanding and to facilitate the State approval process.

Acceptance Criteria

Once the CEPI and DTMB subject matter experts are in agreement that the deliverables are complete, the DTMB and CEPI Project Managers will sign off at the conclusion of this phase. The State will have a minimum of five business days from the time the Contractor completes all necessary tasks and submits acceptance documentation to the State to sign off. Additional high-level acceptance criteria for Document Deliverables and Software Deliverables are listed in Section 1.501.

E. Implementation

Implementation support provides coordination of all project-related activities taking place during the implementation process and enables staff to make a smooth transition to the new system in production. The Contractor shall provide the following:

EXPECTED OUTCOMES

The Contractor shall provide the following MSLDS outcomes:

Improved data quality

The ETL process and the building of the unified source database will enforce strict data guidelines. Lookup values will be applied consistently, and the data within each column will be consistently formatted and range limited. Normalization will force each of the reference columns from the original source data to be correct, and more easily identify duplicate and orphaned data.

Improved analytics

The cleansed and merged data is the first requirement for longitudinal data analysis. It also provides the foundation necessary to perform dimensional data modeling. The common cross year structures and OLAP cubes will allow CEPI to perform queries that are simply too complicated today.

Improved reporting, including timeliness

The primary form of analytics will be reporting. By developing standardized data sets, reports can be consistent, reused year to year, and simpler to manage.

Reduced effort

By structuring the data so it is simpler to work with, every aspect of CEPI's reporting and analysis needs become easier. The ETL and cleansing process means data is combined and cleaned only once rather multiple times across reports and extracts. Queries take less effort to



write, consistent templates make reports easier to create, and simplified aggregate data in OLAP cubes means some inquiries that once took complex programs to implement can be produced very quickly with very simple queries.

Consistent results

When multiple users are accessing complex measurements, the business logic to calculate these measurements have already been applied to stored data or have been embedded in systems so they are applied every time a measure is accessed. This will ensure that when a measure is queried, manipulated, and viewed by different dimensions each time, the State can be assured that the underlying calculation has been applied consistently.

Deliverable(s)

Production Environment

1. It shall be a joint responsibility between the Contractor and DTMB to install and configure all environments at the State.
2. The warranty period (60 days following final phase acceptance) will commence after all critical and high prioritized system issues identified during UAT are resolved, accepted by the State and implemented into production for a particular phase or software component. The Contractor is responsible for obtaining formal written acceptance per the State's SEM/SUITE methodology.
3. Training of the State staff per the Turnover Plan and Training Plan is a prerequisite of implementation.
4. Post implementation, the Contractor will scale down as appropriate. Throughout the 60 day Performance and Reliability phase, the Contractor will continue to make the Project Manager(s) and Key Architect available to the State to consult on resolution of workflow and system issues with regards to ETL process timing and report generation.

MSLDS Implementation

1. Prior to implementation of each phase, the Contractor will have full responsibilities to:
 - a. Coordinate activities and monitor progress against a detailed project plan ensuring each task is completed accurately and on schedule.
 - b. Communicate with the State Project Team to provide status and escalate and resolve risks and issues.
 - c. Coordinate implementation with training.
 - d. Ensure data readiness.
 - i. Coordinate with the CEPI MSLDS unit to address manual and automated data correction activities pre- and post-ETL.
 - ii. Provide staff to perform manual and automated data. cleanup/extraction activities.
 - e. Implement new workflow:
 1. Work with the State Project Team to plan the transition from the existing workflow to the new one, using the MSLDS.
 - f. Provide onsite post-implementation help to resolve workflow and system issues with regards to ETL process timing and report generation.

Acceptance Criteria

Once the CEPI and DTMB subject matter experts are in agreement that the deliverables are complete, the DTMB and CEPI Project Managers will sign off at the conclusion of this phase. The State will have a minimum of five business days from the time the Contractor completes all necessary tasks and submits acceptance documentation to the State to sign off. Additional high-level acceptance criteria for Document Deliverables and Software Deliverables are listed in Section 1.501.



F. Training

Internal training/professional development for State staff and key external technical team members will be required for the maintenance and operation of the system in addition to the system documentation requirements of the project. **Table 3 in Appendix H outlines the cost associated with all training for this project including, but not limited to, training for SOM staff for the SAS components necessary for system operations, ETL tools and methodology, and best practices for data warehouse design, development and maintenance.** Professional development and training activities will be agreed to by the State for its staff members. The State reserves the right to modify the State's training as needed. The State will work through the Contractor on training registration and logistics for sending appropriate staff to training venues.

Deliverable(s)

The Contractor shall provide the following:

- Training of State and key external technical team members on system maintenance, operation and data query/extract processes of the system
 - Procurement of 50 SAS training credits
 - Data Warehouse methodology training (10 people)
 - ETL/Architecture tool training (5 people)
 - Other training to be specified by the Contractor (10 people)
1. The Contractor and the State will identify user groups based on individual functions and responsibilities, specifically targeting State and key external technical team members on system maintenance, operation and data query/extract processes of the system, the data warehouse methodology, and the ETL/architecture tool.
 2. The Contractor will utilize traditional training methodologies and web-based tools to achieve cost effective and lasting outcomes from training.
 3. The Contractor will develop the training material in formats that best suit the training activities and will plan the activities around the Training and Knowledge Transfer Plan developed during the planning stage.
 4. The Contractor's Training Specialists will work the identified user groups to understand the training needs and customize materials based on identified users' responsibilities within the proposed system.
 5. The Contractor's Training Specialist and the Contractor and State Project Managers will work together to achieve training goals. The Contractor's project manager will track progress on these training goals.
 6. The Contractor will develop multimedia based training material for trainees. This training media will contain clips showing critical functions overlaid with audio comments. The video clips will be hosted on the system websites and be made available for all users at all times.
 7. The Contractor will create a business use case based online user guide that will provide navigational flow, data input and default data guide lines, report information, workflow descriptions, page level field information, validations and recommended resolutions for all in scope business functions. The guide will be structured in a way so that it can be updated for future functional changes. The guide will also provide a search function to quickly locate the help topics.
 8. The Contractor will create a System Operations Manual that will provide the following supplemental training information:
 - i. Installation information with a reference to the Installation Plan
 - ii. Configuration procedures (database, middleware, etc.)
 - iii. Messages and codes
 - iv. Physical architecture diagram for Development, Test, UAT, and Production environments
 - v. Query, ETL, and extract procedures
 - vi. Reporting and Analysis Services Deployment Processes



- vii. Scheduled batch processes
- viii. System Health Check Procedures
- ix. Escalation procedures
- 9. The Contractor will develop training material for the build and configuration management processes and present them in classroom sessions as required.
- 10. The Contractor will perform training activities according the Training and Knowledge Transfer Plan which will be scheduled with State Project Manager(s) at various points in time appropriate for knowledge transfer.
- 11. The Contractor's Training Specialist will use the State Training facilities to conduct training sessions to be performed in a time-boxed manner over a period of 25 consecutive business days. The training locations will be finalized during planning.
- 12. The Contractor's training plan will include buffer sessions to include additional users identified late in the project or to accommodate replacements.
- 13. The Contractor's training specialist will submit classroom evaluation reports at the end of each session to the Contractor's Project Manager.
- 14. The Contractor's Training Analyst will provide exercises based on real business case scenarios. The exercises will be customized toward the group being trained.
- 15. The Contractor's Training Analyst will provide Training Progress Report for the entire training duration. This will include customer evaluation report.
- 16. Deliverables include:
 - i. User training sessions – Sessions will be delivered face to face. Support materials will be created, when deemed appropriate, for inclusion in an online repository of multimedia objects.
 - ii. Post-Classroom Practice Material – Practice materials based on business use cases to the end users.
 - iii. Training Progress Reports – User Training progress details, including status on requisite SAS training.

Acceptance Criteria

High-level acceptance criteria for Document Deliverables and Software Deliverables are listed in Section 1.501.

G. Knowledge Transfer/Transition

The State intends to take over system maintenance after the conclusion of the warranty period and knowledge transfer/transition of each project phase. The State recognizes that additional assistance may be required and asks the Contractor to plan for one maintenance FTE capable of assisting in the maintenance of all system functions for two years within the RFP response.

Activities required to meet this milestone are split between the Contractor, CEPI and DTMB. On the business side, CEPI staff are responsible for daily operations. On the technical side, DTMB will be responsible for hardware/environmental and technical system maintenance support, once knowledge transfer for each phase is complete. The Contractor will provide full system support for 60 calendar days following final acceptance of each phase and if the Contract options are exercised will also do concurrent development for future phases. The Contractor must propose a feasible plan for handling the knowledge transfer/turnover of the production system to the State, while managing other concurrent activities.

Deliverable(s)

Updated Turnover Plan

1. The Contractor must implement the turnover process, consistent with the approved Turnover Plan.
 - a. The updated Turnover Plan will confirm the steps and requisite responsibilities for transferring the daily business operation to State staff.
 - b. Contractor updates to the turnover plan will include tasks discovered as a result of previously unknown gaps in the knowledge base, change orders for changes in functionality or as a response to a risk as defined in the Risk Plan



- c. The Contractor will continue to monitor and track the turnover process against the Turnover Plan, Quality Plan and Project Plan throughout the duration of the project
- d. The updated plan is due no later than 30 business days prior to the planned production implementation date and should be enhanced to include more detail on:
 - a. Responsibilities of the respective parties (CEPI, DTMB and Contractor) for each system area
 - b. Proposed transition schedule to State staff
 - c. Proposal for Contractor maintenance after the Transition Phase is complete
- e. The knowledge transfer tasks from the Turnover Plan will be included in the Project Plan and tracked through the Quality Plan with metrics on the status and effectiveness of these tasks reported to the State Project Manager.

Final Turnover Report

- 1. This report is due 20 business days prior to the termination of the Knowledge Transfer/Transition Phase for the new system and should also include:
 - a. Training provided to each State Staff member and business area.
 - b. Any risks and proposed remediation for continued CEPI operation of the business areas after the Transition Phase.
 - c. Number and skills required of State business and technical resources after transition.

Updated Documentation

- 1. The Contractor must update any documentation, including the metadata repository, which has been previously populated by the Contractor to reflect the updated and enhanced accepted functionality of the system.
- 2. The Contractor shall provide updated versions of all systems documentation and metadata within 10 business days of the production implementation date.
- 3. Documentation must meet all requirements of the approved Documentation Standards Plan and be provided in electronic and hard copy, if requested by State.
- 4. Documentation includes:
 - a. Complete system design documentation as described in this contract
 - b. Metadata repository
 - c. Test case and results documentation
 - d. All operations procedures not covered in system documentation or metadata repository and requested by the State.

Acceptance Criteria

Once the CEPI and DTMB subject matter experts are in agreement that the deliverables are complete, the DTMB and CEPI Project Managers will sign off at the conclusion of this phase. The State will have a minimum of five business days from the time the Contractor completes all necessary tasks and submits acceptance documentation to the State to sign off. Additional High level acceptance criteria for Document Deliverables and Software Deliverables are listed in Section 1.501.

H. Other Services

- 1. Future Phase Definition: The fixed price associated with this Contract is for the delivery of the first phase of the MSLDS project. The State may choose to process Contract changes and/or exercise Contract options to deliver future project phases and or conduct maintenance activities. The State reserves the right to request the Contractor to facilitate sessions and document the detailed requirements for future phases. The State also reserves the right to request the Contractor to make scope changes in accordance with the State's needs. **The Contractor's hourly rates for each project resource are found in Appendix H and will be used to accommodate additional requests.**

Additional partial requirements for subsequent phases are also included in this contract. If the State elects to proceed, the Contractor will provide the State with a project change request that outlines the not-to-exceed cost to coordinate, facilitate, and document future phase requirements, starting with Phase 2 and later, with future delivery phases. At the State's request, the Contractor will then



perform the necessary tasks to complete the detailed requirements definition activity. Should the State elect to proceed, the Phase 2 detailed requirements activity, including the State's sign-off, will be completed by no later than April 15, 2011 unless otherwise agreed to by the State. At the State's request, the Contractor will then provide a fixed-price, deliverables based price and detailed statement of work that fully reflects all additional deliverables for the delivery of the next phase within 10 business days of the request. Future phase work will be bound by the same contractual terms and conditions outlined in this contract. If the State elects to proceed, the State, via the DTMB Office of Purchasing, will process the necessary Contract Change Notices to enable the continuation of work with the Contractor on the delivery of subsequent MSLDS phases.

Additional requirements gathering efforts include but are not limited to:

- Requirements gathering for teacher/student/course linking reports
- Requirements gathering for workforce data and reports
- Requirements gathering for postsecondary data and reports
- Requirements gathering for student financial aid data and reports
- Requirements gathering for other reporting necessary to meet America Competes Act

2. The Contractor will coordinate with the State's SLDS project team, the State's selected Title II Part D grantee and their selected delivery vendor in incorporating developed reports and data extracts into the Michigan Education Data Portal that is hosted at the grantee's site. These reports can include any and all reports included in this Contract or added through the project change control process. The State reserves the right to require the Contractor to engage in a sub-Contractor arrangement (with the grantee's selected delivery vendor being the sub-Contractor) should modifications to the Michigan Education Data Portal become necessary to accommodate the addition of new reports and functionality from this project. Once an approved statement of work is agreed to by all parties, the Contractor will be expected to provide a fixed-price, deliverables-based bid for the work using the project change control process. If the State agrees, this Contract will be amended to reflect additional deliverables via the DTMB Office of Purchasing contract change process. The State reserves the right to seek competitive quotes for this and any other additional work should it choose to do so.

Among the new information to be added to the secured portion of the education portal will be data sets that link teachers to student information, allowing local districts to assess individual teacher impact on student performance and consider student growth factors in teacher and principal evaluation systems. Data on students not tested on annual accountability tests will also be added. A data structure and process to extract these data and store them in the SLDS, matching this information to enrollment and program participation data, will be created as will reports at the individual and aggregate level.

1.201 CONTRACTOR STAFF, ROLES, AND RESPONSIBILITIES

I. Contractor Staff

The Contractor commits to retaining the named key personnel throughout the project for as long as the resources are actively working for the Contractor and/or its sub-Contractors and as long as the State is in agreement that these resources are performing the work adequately. The Contractor commits to providing non-key resources with equivalent levels of skill and experience as those proposed in the Contractor's RFP response.

The Contractor must submit letters of commitment for Key Personnel, signed by the identified resource, stating their commitment to work for the Contractor/subcontractor on this project. If the identified personnel are currently assigned to a State project the Contractor must provide a letter signed by the State Project Manager releasing the individual from the project upon execution of the contract.



The Contractor will provide, and update when changed, an organizational chart indicating lines of authority for all personnel involved in performance of this Contract and relationships of this staff to other programs or functions of the firm. This chart must also show lines of authority to the next senior level of management and indicate who within the firm will have prime responsibility and final authority for the work.

The Contractor's identified a Single Point of Contact (SPOC):

Brian Dumont
1921 E. Miller Rd, Suite B
Lansing, MI 48911
517-282-3978

The duties of the **SPOC** shall include, but not be limited to:

- supporting the management of the Contract,
- facilitating dispute resolution, and
- advising the State of performance under the terms and conditions of the Contract.

The State reserves the right to require a change in the current SPOC if the assigned SPOC is not, in the opinion of the State, adequately serving the needs of the State.

All Key Personnel may be subject to the State's interview and approval process. Any key staff substitution must have the prior approval of the State. The State has identified the following as key personnel for this project:

1. **Project Manager**
 - a. Brad Olsen
 - b. Amber Murphy
2. **System Architect/DBA**
 - a. Christopher Weiss

The Contractor will provide project manager and system architect/DBA resources to work closely with the designated personnel from the State to insure a smooth transition to the new system. The project manager and system architect/DBA will coordinate all of the activities of the Contractor personnel assigned to the project and create all reports required by State. The Contractor's project manager's responsibilities include, but are not limited to the following:

- Manage all defined Contractor responsibilities in this Scope of Services using the State's SEM/SUITE/PMM processes where applicable.
- Manage Contractor's sub-Contractors, if any
- Develop the project plan and schedule, and update as needed
- Serve as the point person for all project issues
- Coordinate and oversee the day-to-day project activities of the project team
- Assess and report project feedback and status
- Escalate project issues, project risks, and other concerns
- Review all project deliverables and provide feedback
- Proactively propose/suggest options and alternatives for consideration
- Utilize change control procedures
- Prepare project documents and materials
- Manage and report on the project's budget

The System Architect/DBA's responsibilities include, but are not limited to the following:

- Develop the overall data architecture strategy of the system, ensuring reusability, integration, and optimization.
- Perform detailed data and requirements analysis and developing the dimensional data model.



- Ensure system addresses the State's business requirements and enforces rules and performs calculations efficiently and accurately as identified by the State.
- Work with the Project Manager to develop plans for the overall development of the system and ensure that the proper design documentation has been developed.
- Serve as technical subject matter expert on data warehousing methodology used on the project and tools used in the system's development.
- Manage the physical design of the system and all its component parts.
- Architect ETL process from end-to-end including coordination of testing activities.
- Coordinate knowledge transfer and phase hand-off to State resources.

The Contractor must provide sufficient qualified staffing to satisfy the deliverables of this Statement of Work.

B. On Site Work Requirements

1. Location of Work

The work is to be performed, completed, and managed at the following locations:

On Site – Hannah Building – 608 W. Allegan St. Lansing, MI and surrounding Lansing-based buildings

Off Site – Contractor's offices

2. Hours of Operation:

- a. Normal State working hours are 8:00 a.m. to 5:00 p.m. EST, Monday through Friday, with work performed on an exception basis as necessary after those hours to meet project deadlines. No overtime will be authorized or paid.
- b. The State is not obligated to provide State management of assigned work outside of normal State working hours. The State reserves the right to modify the work hours in the best interest of the project.
- c. The Contractor shall observe the same standard holidays as State employees. The State does not compensate for holiday pay. Work can continue, at the discretion of the State and Contractor project managers, outside State offices.
- d. Should the State implement specific furlough days during the course of the project, the Contractor shall not be permitted to work in any State buildings. Work can continue, at the discretion of the State and Contractor project managers, outside State offices.

3. Travel:

- a. No travel or expenses will be reimbursed. This includes travel costs related to training provided to the State by Contractor.
- b. Travel time will not be reimbursed.

4. Additional Security and Background Check Requirements:

The Contractor must present certifications evidencing satisfactory Michigan State Police Background checks (ICHAT) and drug tests for all staff identified for assignment to this project. The Contractor will be required to conduct, pay for and report background check results to the State for all Contractor/sub-Contractor project resources with non-Michigan driver's licenses.

In addition, proposed Contractor personnel will be required to complete and submit an RI-8 Fingerprint Card for the National Crime Information Center (NCIC) Finger Prints, if required by project.

The Contractor will be required and is responsible for any costs associated with ensuring their staff meets all requirements.

See the links below for specifics on CEPI and Federal data access policies:

- CEPI Data Access and Management Policy
http://www.michigan.gov/documents/Data_Policy_50459_7.pdf
- Family Educational Rights and Privacy Act (FERPA)
<http://www2.ed.gov/policy/gen/guid/fpco/index.html>



At the State's request, the Contractor will be required to sign all necessary data access policies.

The Contractor will provide a summary of the necessary project resources (including their roles) and an estimated schedule that outlines the number of resources that will require space at the State over the course of the project.

Dewpoint personnel conducting work at the State will be responsible for providing their own laptops. All laptops must be scanned by DTMB prior to use at the State,

1.202 STATE STAFF, ROLES, AND RESPONSIBILITIES

The State will provide the following resources for the Contractor's use on this project:

- Shared work space (for a maximum of 3 people), desks, telephones (no voicemail) if available
- Access to a LAN printer
- Access to copiers and fax machine
- Meeting facilities
- VPN access
- Conference call numbers (up to two 1-hour meetings per week)

The State project team will include Executive Subject Matter Experts (SME's), a DTMB and Agency project manager, and both DTMB and CEPI project support staff:

Executive Subject Matter Experts

The Executive Subject Matter Experts representing the business units involved will provide the vision for the business design and how the system shall provide for that vision. They shall be available on an as needed basis. The Executive SME's will be empowered to:

- Resolve project issues in a timely manner
- Review project plan, status, and issues
- Resolve deviations from project plan
- Provide acceptance sign-off
- Utilize change control procedures
- Ensure timely availability of State resources
- Make key implementation decisions, as identified by the Contractor's project manager, within 48-hours of their expected decision date.

Name	Agency/Division	Title
Tom Howell	CEPI	Director
Mike McGroarty	CEPI	Longitudinal Data Manager

State Project Managers - (DTMB and CEPI)

DTMB will provide a Project Manager. DTMB will be responsible for the State's infrastructure and work together with the Contractor in determining the system configuration.

The State's Project Manager will provide the following services:

- Provide State facilities, as needed
- Coordinate the State resources necessary for the project
- Facilitate communication between different State departments/divisions
- Provide acceptance and sign-off of deliverables/milestones
- Review and sign-off of timesheets and invoices
- Resolve project issues
- Escalate outstanding/high priority issues
- Utilize change control procedures



- Conduct regular and ongoing review of the project to confirm that it meets original objectives and requirements
- Document and archive all important project decisions
- Arrange, schedule and facilitate State staff attendance at all project meetings.

Name	Agency/Division	Title
Karen Buckwalter	DTMB	Project Manager
Mike McGroarty	CEPI	Project Manager

The State will also provide additional project support to be mentored/coached throughout the development process and ultimately receive knowledge transfer and take over the maintenance of the system. These support personnel will also be involved in requirements gathering for future phases (if applicable), reviewing documentation (as appropriate), conducting User Acceptance Testing, and receiving training as required.

DTMB shall also provide a Contract Administrator whose duties shall include, but not be limited to, supporting the management of the Contract.

Name	Agency/Division	Title
	DTMB	Contract Administrator

1.203 OTHER ROLES AND RESPONSIBILITIES

Agency/Division	Title
DTMB/CEPI	Business Analysts
DTMB/Agency Services	DBA/System Architect
DTMB/Agency Services	SAS Specialist
DTMB/Agency Services	IT Manager

1.301 PROJECT PLAN MANAGEMENT

Preliminary Project Plan

1. A preliminary project plan and RASIC chart is attached to this contract and includes the following:
 - a. A description of the deliverables to be provided under this contract.
 - b. Target dates and critical paths for the deliverables.
 - c. Identification of roles and responsibilities, including the organization (and specific resources where applicable) responsible. Contractor is to provide a roles and responsibility matrix.
 - d. The labor, hardware, materials and supplies required to be provided by the State in meeting the target dates established in the Preliminary Project Plan.
 - e. Internal milestones
 - f. Task durations
2. The Preliminary Project Plan, in conjunction with Table 1 in Appendix H describes deliverable/milestones for which payments shall be made.
 - a. Payment to the Contractor will be made upon the completion and acceptance of the deliverables or milestones, not to exceed contractual costs of the phase. A milestone is defined as complete when all of the deliverables within the milestone have been completed.
 - b. Failure to provide deliverable/milestone by the identified date may be subject to liquidated damages as identified in Article 2, Section 2.073



Note: A Final Project Plan will be required as stated in Article 1, Section 1.301 (C) Project Control.

A. Orientation Meeting

1. Upon **5** working days from execution of the Contract, the Contractor will be required to attend an orientation meeting to discuss the content and procedures of the Contract.
2. The meeting will be held in Lansing, Michigan, at a date and time mutually acceptable to the State and the Contractor.
3. The State shall bear no cost for the time and travel of the Contractor for attendance at the meeting.

B. Performance Review Meetings

1. The State will require the Contractor to attend monthly meetings, at a minimum, to review the Contractor's performance under the Contract.
2. The meetings will be held in Lansing, Michigan, or by teleconference, as mutually agreed by the State and the Contractor.
3. The State shall bear no cost for the time and travel of the Contractor for attendance at the meeting.

C. Project Control

1. The Contractor must carry out this project under the direction and control of DTMB and CEPI.
2. Within **15** working days of the execution of the Contract, the Contractor must submit to the State project manager(s) for final approval of the project plan.
 - a. This project plan must be in agreement with Article 1, Section 1.104 Work and Deliverables, and must include the following:
 - i. The Contractor's project organizational structure.
 - ii. The Contractor's staffing table with names and title of personnel assigned to the project. This must be in agreement with staffing of accepted proposal. Necessary substitutions due to change of employment status and other unforeseen circumstances may only be made with prior approval of the State.
 - iii. The project work breakdown structure (WBS) showing sub-projects, activities and tasks, and resources required and allocated to each.
 - iv. The time-phased plan in the form of a graphic display, showing each event, task, and decision point in the WBS.
3. The Contractor must manage the project in accordance with the State Unified Information Technology Environment (SUITE) methodology which includes standards for project management, systems engineering, and associated forms and templates which is available at <http://www.michigan.gov/suite>
 - a. Contractor must use an automated tool for planning, monitoring, and tracking the Contract's progress and the level of effort of any Contractor personnel spent performing Services under the Contract. The tool shall have the capability to produce:
 - i. Staffing tables with names of personnel assigned to Contract tasks.
 - ii. Project plans showing tasks, subtasks, deliverables, and the resources required and allocated to each (including detailed plans for all Services to be performed within the next **90** calendar days, updated semi-monthly).
 - iii. Updates must include actual time spent on each task and a revised estimate to complete.
 - iv. Graphs showing critical events, dependencies and decision points during the course of the Contract.
 - b. Any tool(s) used by the Contractor for such purposes must produce information of a type and in a manner and format that will support reporting in compliance with the State standards.



1.302 REPORTS

The Contractor's project manager will submit a proposed Communication Plan for the State Project Manager's review and approval within 20 business days after the execution of the contract. One item on the communication plan will be reporting. Reporting formats must be submitted to the State's DTMB and CEPI Project Managers for approval within **20** business days after the execution of the contract. Once both parties have agreed to the format of the reports, they shall become the standard to follow for the duration of the contract. The reports may be modified to reflect the current stage of the project. For instance, testing status metrics would be included as part of the reports during the testing phase of the project.

The Contractor will provide CEPI and DTMB with bi-weekly Project Status Reports in a format approved by the State's Project Manager. The reports will provide information on:

- Dashboard status of project phases and stages
- Weekly/monthly activities
- Accomplishments/Completed deliverables
- Open issues and issue status
- Risks, mitigations, contingencies
- Upcoming events and planned accomplishments
- Open actions

1.401 ISSUE MANAGEMENT

An issue is an identified event that if not addressed may affect schedule, scope, quality, or budget.

The Contractor shall maintain an issue log for issues relating to the provision of services under this Contract. The issue management log must be communicated to the State's Project Manager in conjunction with project status updates. The issue log must be updated and minimally, must contain the following elements:

- Issue number
- Issue identification date
- Description of issue
- Party responsible for resolving issue (Contractor or State).
- Priority for issue resolution (to be mutually agreed upon by the State and the Contractor)
- Resources assigned responsibility for resolution
- Resolution date
- Resolution description

An issue management plan and issue log format shall be submitted to the State for approval within twenty (20) business days after the effective date of the contract resulting from the upcoming RFP. The issue management plan and issue log will be developed during the initial planning phase of the project, and be in accordance with the State's PMM methodology.

1.402 RISK MANAGEMENT

A risk is an unknown circumstance or event that, if it occurs, may have a positive or negative impact on the project.

The Contractor is responsible for establishing a risk management plan and process, including the identification and recording of risk items, prioritization of risks, definition of mitigation strategies, monitoring of risk items, and periodic risk assessment reviews with the State.

A risk management plan and risk tracking log shall be submitted to the State for approval within twenty (20) business days after the execution of this contract. The Risk management plan will be in accordance with the State's PMM methodology. Once both parties have agreed to the risk plan and tracking log, they shall become the standards to follow for the duration of the contract. The risk matrix must be updated, at a minimum, bi-weekly in conjunction with the project status updates.



Risk management involves four primary steps: Risk Planning, Risk Assessment, Risk Analysis and Risk Handling. The Contractor will perform all steps for each risk throughout the course of this contract. The State's SEM/SUITE PMM 06 will be used to document high level risks. The Contractor's PM will document risk action and contingency plans for those risks assessed as either high or medium risk exposure.

Risk Planning entails identifying and documenting risks. During Risk Assessment, the project team will assess the risks and create a ranking based on the probability and impact associated with each risk item. The Contractor's project manager will facilitate a review of the risks with the State Project Managers and Business leads (as appropriate) to determine whether the risks should be accepted, mitigated, avoided, or transferred.

The Contractor will work with the State and coordinate input from the State related to the identification and prioritization of risks. The Contractor and the State are responsible for identification of risks for each phase and sub-phase (e.g. initiation/planning, development, testing, implementation, turnover, etc.) of the project. Mitigating and/or eliminating assigned risks will be the responsibility of the Contractor. The State will assume the same responsibility for risks assigned to State resources.

1.403 CHANGE MANAGEMENT

Change management is defined as the process to communicate, assess, monitor, and control all changes to system resources and processes. The State also employs change management in its administration of the Contract.

A change management plan format shall be submitted to the State for approval within twenty (20) business days after the effective date of the contract. The change management plan will be developed during the initial planning phase of the project, and be in accordance with the State's PMM methodology.

The Contractor will employ the change control methodologies to justify changes in the processing environment, and to ensure those changes will not adversely affect performance or availability.

All changes will be documented using a project change request, consistent with the State's Project Management Methodology (PMM). The purpose of a Change Request is to document, track, and control any changes to the contract or adjustments to the agreed-upon scope of work for the project. A change may or may not impact the cost or schedule of the project. The Change Request process provides a documented trail of changes, and provides information for the assessment of time, resource availability, and cost impact of the change (if any). Change Requests may also be used to document a reduction of cost or the removal of functionality.

The Contractor's Project Manager will complete and submit change requests to the State Project Managers for approval. Associated impacts will be fully documented in the Change Request document, including but not necessarily limited to the following:

- Project schedule
- Cost variance
- Missed project schedule milestones
- Project scope
- Significant technology deviation
- Project contract

Some project changes will also require a contract change (for instance for the addition of a new phase to the project.) If a contract change is necessary, the State's Project Manager will work with the Department of Technology Management and Budget's Purchasing Operations representatives to make recommendations to the Director of Purchasing Operations regarding ultimate approval/disapproval of change request. If the DTMB Purchasing Operations Director agrees with the proposed modification, and all required approvals are obtained (including the Office of the State Employer and State Administrative Board), the Purchasing Operations Buyer will issue an addendum to the Contract, via a Contract Change Notice. A minimum of 12 weeks from the time the need for a contract change is identified and fully documented to the time of approval is required.

Contractors who provide products or services prior to the issuance of a Contract Change Notice by the DTMB Office of Purchasing Operations, risk non-payment for the out-of-scope/pricing products and/or services.



1.501 CRITERIA

Document Deliverables

1. Documents include, but are not limited to plans, review documents, project schedules, and status reports.
2. Documents are dated and in electronic format, compatible with State of Michigan software in accordance with Article 1.103
3. Each deliverable will be complete within itself and will be consistent with previously produced deliverables.
4. Requirements documents, including but not limited to the requirements traceability matrix are reviewed and updated throughout the development process to assure requirements are delivered in the final product.
5. Draft documents are not accepted as final deliverables.
6. The documents will be reviewed and accepted in accordance with the requirements of the Contract and Appendices.
7. CEPI and DTMB will review documents within a mutually agreed upon timeframe. The State will do everything possible to provide timely documentation reviews. As a general rule, the minimum required timeframe for any document that is 25 pages or less is five business days. If multiple documents are being reviewed concurrently or if project activities of higher priority are happening concurrently, the Contractor must assume that the required review timeframe will increase.
 - a. The receipt date is not included in the review period.
 - b. If a deliverable is determined to be unacceptable, the State will identify the deficiencies to the Contractor.
 - c. The Contractor will be expected to resolve any deficiencies as quickly as possible, not to exceed five days, unless otherwise agreed to by the State.
 - d. Approval/signoff documents will be presented to the State by the Contractor only after all document issues are resolved. The approval documents will be signed by the DTMB and CEPI Project Managers.

Service Deliverables

1. Any additional services requested of the Contractor will be accepted in accordance with the requirements of this contract.
2. CEPI and DTMB will review any Request for Approval of Services documentation within a mutually agreed upon timeframe. Approval documents will be signed by the DTMB and CEPI Project Managers.

System Deliverables - System Deliverables include, but are not limited to, software product, development tools, support tools, data migration software, data marts, ETL Processes, metadata structures, data cubes, data marts, integration software, and installation software.

1. Beta software is not accepted as final deliverable.
2. The system deliverables will be reviewed and accepted in accordance with the requirements of the contract.
3. CEPI and DTMB will review system deliverables within a mutually agreed upon timeframe for acceptance of functionality, usability, installation, performance, security, standards compliance, backup/recovery, and operation. The State will do everything possible to provide timely reviews and approvals. Due to the vastly differing nature of system deliverables, a general rule/timeline for review/approval cannot be provided. The Contractor must consider that if multiple deliverables are being reviewed concurrently or if other project activities of higher priority are happening concurrently, the Contractor must assume that the required review timeframe will increase.
 - a. Approval/signoff documents will be presented to the State by the Contractor only after all document issues are resolved. The approval documents will be signed by the DTMB and CEPI Project Managers.



4. System deliverables are installed and configured, with assistance from DTMB, in an appropriate environment (e.g. development, UAT/QA testing, production).
5. Contingency plans, de-installation procedures, and system deliverables are provided by the Contractor and approved by DTMB and CEPI Project Managers.
6. Final acceptance of the system deliverables will depend on the successful completion of User Acceptance Testing (UAT) and the successful resolution of UAT-related issues as described in Section 1.104 of this contract.
7. Testing will demonstrate the system's compliance with the requirements of the RFP. At a minimum, the testing will confirm the following:
 - a. Functional - the capabilities of the system with respect to the functions and features described in the RFP.
 - b. Performance - the ability of the system to perform the workload throughput requirements. All problems should be completed satisfactorily within the allotted time frame.
8. CEPI and DTMB will review test software, data, and results within a mutually agreed upon and reasonable timeframe.
 - a. Approvals will be written and signed by the DTMB and CEPI Project Managers.
 - b. Unacceptable issues will be documented and submitted to the Contractor.
 - c. After issues are resolved or waived, the Contractor will resubmit test software, data and results for approval.
9. Required extracts and reports for each phase shall be developed by the Contractor and shall be performed with results meeting the quality checks identified for each item.
10. DTMB will review software license agreements, if applicable, within a mutually agreed upon timeframe.
 - a. Approvals will be written and signed by DTMB Project Manager.
 - b. Unacceptable issues will be documented and submitted to the Contractor.
 - c. After issues are resolved or waived, the Contractor will resubmit the license agreement for approval and final signature by the authorized State signatory.
11. Source code, where applicable, is reviewed by CEPI and DTMB within a mutually agreed upon timeframe for readability, structure, and configuration management.
 - a. Approvals will be written and signed by DTMB and CEPI Project Managers.
 - b. Unacceptable issues will be documented and submitted to the Contractor.
 - c. After issues are resolved or waived, the Contractor will resubmit source code for approval.

1.502 FINAL ACCEPTANCE

Final acceptance is expressly conditioned upon completion of ALL deliverables/milestones, completion of ALL tasks in the project plan as approved, completion of ALL applicable inspection and/or testing procedures, and the certification by the State that the Contractor has met the defined requirements. Completion includes the correction of all errors found as the result of reviews and testing.

1.601 Compensation and Payment

Method of Payment

The project will be paid based on acceptance of milestone deliverables according to the firm fixed price outlined in **Appendix H, Table 1**. Physical deliverables will be deemed acceptable when approved by the appropriate State parties. Milestone pricing is all inclusive. Any expense the Contractor expects to incur should be built into the price for each deliverable and milestone.

Travel

The State will not pay separately for any travel expenses, including hotel, mileage, meals, parking, etc. Travel time will not be reimbursed.

**Price Guarantee**

If the Contractor reduces its prices for any of the software or services during the term of this Contract, the State shall have the immediate benefit of such lower prices for new purchases. Contractor shall send notice to the State's DTMB Contract Administrator with the reduced prices within fifteen (15) Business Days [or other appropriate time period] of the reduction taking effect.

Contractor agrees all the prices, terms, warranties, and benefits provided in this Contract are comparable to or better than the terms presently being offered by Contractor to any other governmental entity purchasing the same quantity under similar terms. If, during the term of this Contract, Contractor shall enter into contracts with any other governmental entity providing greater benefits or more favorable terms than those provided by this Contract, Contractor shall be obligated to provide the same to the State for subsequent purchases.

Statements of Work and Issuance of Purchase Orders

- Unless otherwise agreed by the parties, each Statement of Work will include:
 1. Background
 2. Project Objective
 3. Scope of Work
 4. Deliverables
 5. Acceptance Criteria
 6. Project Control and Reports
 7. Specific Department Standards
 8. Payment Schedule
 9. Travel and Expenses
 10. Project Contacts
 11. Agency Responsibilities and Assumptions
 12. Location of Where the Work is to be Performed
 13. Expected Contractor Work Hours and Conditions
- The parties agree that the Services/Deliverables to be rendered by Contractor pursuant to this Contract (and any future amendments of it) will be defined and described in detail in Statements of Work or Purchase Orders (PO) executed under this Contract. Contractor shall not be obliged or authorized to commence any work to implement a Statement of Work until authorized via a PO issued against this Contract. Contractor shall perform in accordance with this Contract, including the Statements of Work/Purchase Orders executed under it.

Invoicing

Contractor will submit properly itemized invoices to "Bill To" Address on Purchase Order.

Invoices must provide and itemize, as applicable:

- Contract number;
- Purchase Order number
- Associated Purchase Order line number(s)
- Contractor name, address, phone number, and Federal Tax Identification Number;
- Description of any commodities/hardware, including quantity ordered;
- Date(s) of delivery and/or date(s) of installation and set up;
- Price for each item, or Contractor's list price for each item and applicable discounts;
- Maintenance charges;
- Net invoice price for each item;
- Shipping costs;
- Other applicable charges;
- Total invoice price; and
- Payment terms, including any available prompt payment discounts.



The State may pay maintenance and support charges on a monthly basis, in arrears. Payment of maintenance service/support of less than one (1) month's duration shall be prorated at 1/30th of the basic monthly maintenance charges for each calendar day.

Incorrect or incomplete invoices will be returned to Contractor for correction and reissue.

1.602 TAXES

Sales Tax:

For purchases made directly by the State, the State is exempt from State and Local Sales Tax and such taxes must not be included in the Contractor's pricing. Exemption Certificates for State Sales Tax will be furnished upon request.

Federal Excise Tax:

The State may be exempt from Federal Excise Tax, or the taxes may be reimbursable, if articles purchased under any resulting Contract are used for the State's exclusive use. Certificates showing exclusive use for the purposes of substantiating a tax-free or tax-reimbursable sale will be sent upon request. If a sale is tax exempt or tax reimbursable under the Internal Revenue Code, prices must not include the Federal Excise Tax.

1.603 HOLDBACK

The State shall have the right to hold back, as a retainage, an amount equal to ten percent (10%) of all amounts invoiced by Contractor for Services/Deliverables. The amounts held back shall be released to Contractor after the State has granted Final Acceptance.

1.701 ADDITIONAL TERMS AND CONDITIONS SPECIFIC TO THIS SOW

A. State Funding Obligation

The State's obligation under this Contract is payable only and solely from funds appropriated for the purpose of this Contract. Contractor acknowledges and agrees that all funds for payments after the end of the current fiscal year are subject to the availability of a legislative appropriation for the purpose of this Contract. Events of non-appropriation are addressed further in **Section 2.150** of this Contract.

B. Directives

The State and Contractor are required to meet the objectives and timelines in the grants used to fund this contract. Quarterly updates to the grantor are required. The Contractor will be expected to assist in providing status information necessary for the updates.

C. Federal Grant Requirements

The following links contain certifications and terms which may be required for some purchases paid via Federal funds.

Lobbying Certifications are usually for agreements over \$100,000. The debarment certification is required for all agreements. The last link is where you can go and search for debarred or suspended Contractors:

<http://www.law.cornell.edu/uscode/31/1352.html>

http://www.archives.gov/federal_register/codification/executive_order/12549.html

http://www.archives.gov/federal_register/executive_orders/pdf/12869.pdf

<http://www.epls.gov/>



Article 2, Terms and Conditions

2.000 Contract Structure and Term

2.001 Contract Term

This Contract is for a period of 4 years beginning (11/18/2010) through (11/17/2014). All outstanding Purchase Orders must also expire upon the termination for any of the reasons listed in **Section 2.150** of the Contract, unless otherwise extended under the Contract. Absent an early termination for any reason, Purchase Orders issued but not expired, by the end of the Contract's stated term, shall remain in effect for the balance of the fiscal year for which they were issued.

2.002 Options to Renew

This Contract may be renewed in writing by mutual agreement of the parties not less than 30 days before its expiration. The Contract may be renewed for up to 5 additional 1 year periods.

2.003 Legal Effect

Contractor accepts this Contract by signing two copies of the Contract and returning them to the Purchasing Operations. The Contractor shall not proceed with the performance of the work to be done under the Contract, including the purchase of necessary materials, until both parties have signed the Contract to show acceptance of its terms, and the Contractor receives a contract release/purchase order that authorizes and defines specific performance requirements.

Except as otherwise agreed in writing by the parties, the State shall not be liable for costs incurred by Contractor or payment under this Contract, until Contractor is notified in writing that this Contract or Change Order has been approved by the State Administrative Board (if required), signed by all the parties and a Purchase Order against the Contract has been issued.

2.004 Attachments & Exhibits

All Attachments and Exhibits affixed to any and all Statement(s) of Work, or appended to or referencing this Contract, are incorporated in their entirety and form part of this Contract.

2.005 Ordering

The State must issue an approved written Purchase Order, Blanket Purchase Order, Direct Voucher or Procurement Card Order to order any Services/Deliverables under this Contract. All orders are subject to the terms and conditions of this Contract. No additional terms and conditions contained on either a Purchase Order or Blanket Purchase Order apply unless they are specifically contained in that Purchase Order or Blanket Purchase Order's accompanying Statement of Work. Exact quantities to be purchased are unknown; however, the Contractor will be required to furnish all such materials and services as may be ordered during the Contract period. Quantities specified, if any, are estimates based on prior purchases, and the State is not obligated to purchase in these or any other quantities.

2.006 Order of Precedence

The Contract, including any Statements of Work and Exhibits, to the extent not contrary to the Contract, each of which is incorporated for all purposes, constitutes the entire agreement between the parties with respect to the subject matter and supersedes all prior agreements, whether written or oral, with respect to the subject matter and as additional terms and conditions on the purchase order must apply as limited by **Section 2.005**.

In the event of any inconsistency between the terms of the Contract and a Statement of Work, the terms of the Statement of Work shall take precedence (as to that Statement of Work only); provided, however, that a Statement of Work may not modify or amend the terms of the Contract. The Contract may be modified or amended only by a formal Contract amendment.

2.007 Headings

Captions and headings used in the Contract are for information and organization purposes. Captions and headings, including inaccurate references, do not, in any way, define or limit the requirements or terms and conditions of the Contract.

**2.008 Form, Function & Utility**

If the Contract is for use of more than one State agency and if the Deliverable/Service does not meet the form, function, and utility required by that State agency, that agency may, subject to State purchasing policies, procure the Deliverable/Service from another source.

2.009 Reformation and Severability

Each provision of the Contract is severable from all other provisions of the Contract and, if one or more of the provisions of the Contract is declared invalid, the remaining provisions of the Contract remain in full force and effect.

2.010 Consents and Approvals

Except as expressly provided otherwise in the Contract, if either party requires the consent or approval of the other party for the taking of any action under the Contract, the consent or approval must be in writing and must not be unreasonably withheld or delayed.

2.011 No Waiver of Default

If a party fails to insist upon strict adherence to any term of the Contract then the party has not waived the right to later insist upon strict adherence to that term, or any other term, of the Contract.

2.012 Survival

Any provisions of the Contract that impose continuing obligations on the parties, including without limitation the parties' respective warranty, indemnity and confidentiality obligations, survive the expiration or termination of the Contract for any reason. Specific references to survival in the Contract are solely for identification purposes and not meant to limit or prevent the survival of any other section

2.020 Contract Administration**2.021 Issuing Office**

This Contract is issued by the Department of Technology, Management and Budget, Purchasing Operations and the Center for Educational Performance and Information (collectively, including all other relevant State of Michigan departments and agencies, the "State"). Purchasing Operations is the sole point of contact in the State with regard to all procurement and contractual matters relating to the Contract. The Purchasing Operations Contract Administrator for this Contract is:

Jacque Kuch, Buyer
Purchasing Operations
Department of Technology, Management and Budget
Mason Bldg, 2nd Floor
PO Box 30026
Lansing, MI 48909
kuchj@michigan.gov
517-241-0239

2.022 Contract Compliance Inspector

The Director of Purchasing Operations directs the person named below, or his or her designee, to monitor and coordinate the activities for the Contract on a day-to-day basis during its term. **Monitoring Contract activities does not imply the authority to change, modify, clarify, amend, or otherwise alter the prices, terms, conditions and specifications of the Contract. Purchasing Operations is the only State office authorized to change, modify, amend, alter or clarify the prices, specifications, terms and conditions of this Contract.** The Contract Compliance Inspector for this Contract is:

Ann Lindberg
Department of Technology, Management and Budget
Agency Services
3022 W. Grand Blvd
Detroit, MI 48202
Lindberga@michigan.gov
313-456-3218

**2.023 Project Manager**

The following individuals will oversee the project:

Karen Buckwalter, State Division Administrator/Senior IT Project Manager
Department of Technology, Management and Budget
608 W. Allegan, Lansing, MI
Buckwalterk1@michigan.gov
Phone: 517-241-0074
Fax: 517-373-3325

Mike McGroarty
Department of Technology, Management and Budget/State Budget Office
Center for Educational Performance and Information
Longitudinal Data Manager
608 W. Allegan, Lansing, MI
McGroartyM@michigan.gov
Phone: 517-241-7430
Fax: 517-335-0488

2.024 Change Requests

The State reserves the right to request from time to time any changes to the requirements and specifications of the Contract and the work to be performed by the Contractor under the Contract. During the course of ordinary business, it may become necessary for the State to discontinue certain business practices or create Additional Services/Deliverables. At a minimum, to the extent applicable, Contractor shall provide a detailed outline of all work to be done, including tasks necessary to accomplish the Additional Services/Deliverables, timeframes, listing of key personnel assigned, estimated hours for each individual per task, and a complete and detailed cost justification.

If the State requests or directs the Contractor to perform any Services/Deliverables that are outside the scope of the Contractor's responsibilities under the Contract ("New Work"), the Contractor must notify the State promptly before commencing performance of the requested activities it believes are New Work. If the Contractor fails to notify the State before commencing performance of the requested activities, any such activities performed before the Contractor gives notice shall be conclusively considered to be in-scope Services/Deliverables and not New Work.

If the State requests or directs the Contractor to perform any services or provide deliverables that are consistent with and similar to the Services/Deliverables being provided by the Contractor under the Contract, but which the Contractor reasonably and in good faith believes are not included within the Statements of Work, then before performing such Services or providing such Deliverables, the Contractor shall notify the State in writing that it considers the Services or Deliverables to be an Additional Service/Deliverable for which the Contractor should receive additional compensation. If the Contractor does not so notify the State, the Contractor shall have no right to claim thereafter that it is entitled to additional compensation for performing that Service or providing that Deliverable. If the Contractor does so notify the State, then such a Service or Deliverable shall be governed by the Change Request procedure in this Section.

In the event prices or service levels are not acceptable to the State, the Additional Services or New Work shall be subject to competitive bidding based upon the specifications.

(1) Change Request at State Request

If the State requires Contractor to perform New Work, Additional Services or make changes to the Services that would affect the Contract completion schedule or the amount of compensation due Contractor (a "Change"), the State shall submit a written request for Contractor to furnish a proposal for carrying out the requested Change (a "Change Request").

(2) Contractor Recommendation for Change Requests:

Contractor shall be entitled to propose a Change to the State, on its own initiative, should Contractor believe the proposed Change would benefit the Contract.



- (3) Upon receipt of a Change Request or on its own initiative, Contractor shall examine the implications of the requested Change on the technical specifications, Contract schedule and price of the Deliverables and Services and shall submit to the State without undue delay a written proposal for carrying out the Change. Contractor's proposal shall include any associated changes in the technical specifications, Contract schedule and price and method of pricing of the Services. If the Change is to be performed on a time and materials basis, the Amendment Labor Rates shall apply to the provision of such Services. If Contractor provides a written proposal and should Contractor be of the opinion that a requested Change is not to be recommended, it shall communicate its opinion to the State but shall nevertheless carry out the Change as specified in the written proposal if the State directs it to do so.
- (4) By giving Contractor written notice within a reasonable time, the State shall be entitled to accept a Contractor proposal for Change, to reject it, or to reach another agreement with Contractor. Should the parties agree on carrying out a Change, a written Contract Change Notice must be prepared and issued under this Contract, describing the Change and its effects on the Services and any affected components of this Contract (a "Contract Change Notice").
- (5) No proposed Change shall be performed until the proposed Change has been specified in a duly executed Contract Change Notice issued by the Department of Technology, Management and Budget, Purchasing Operations.
- (6) If the State requests or directs the Contractor to perform any activities that Contractor believes constitute a Change, the Contractor must notify the State that it believes the requested activities are a Change before beginning to work on the requested activities. If the Contractor fails to notify the State before beginning to work on the requested activities, then the Contractor waives any right to assert any claim for additional compensation or time for performing the requested activities. If the Contractor commences performing work outside the scope of this Contract and then ceases performing that work, the Contractor must, at the request of the State, retract any out-of-scope work that would adversely affect the Contract.

2.025 Notices

Any notice given to a party under the Contract must be deemed effective, if addressed to the party as addressed below, upon: (i) delivery, if hand delivered; (ii) receipt of a confirmed transmission by facsimile if a copy of the notice is sent by another means specified in this Section; (iii) the third Business Day after being sent by U.S. mail, postage pre-paid, return receipt requested; or (iv) the next Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.

State:

State of Michigan
Purchasing Operations
Attention: Jacque Kuch
PO Box 30026
530 West Allegan
Lansing, Michigan 48909

Contractor:

Dewpoint
1921 E. Miller Rd, Suite B
Lansing, MI 48911

Either party may change its address where notices are to be sent by giving notice according to this Section.

2.026 Binding Commitments

Representatives of Contractor must have the authority to make binding commitments on Contractor's behalf within the bounds set forth in the Contract. Contractor may change the representatives from time to time upon giving written notice.

2.027 Relationship of the Parties

The relationship between the State and Contractor is that of client and independent Contractor. No agent, employee, or servant of Contractor or any of its subcontractors shall be deemed to be an employee, agent or servant of the State for any reason. Contractor shall be solely and entirely responsible for its acts and the acts of its agents, employees, servants and subcontractors during the performance of the Contract.

**2.028 Covenant of Good Faith**

Each party shall act reasonably and in good faith. Unless stated otherwise in the Contract, the parties shall not unreasonably delay, condition or withhold the giving of any consent, decision or approval that is either requested or reasonably required of them in order for the other party to perform its responsibilities under the Contract.

2.029 Assignments

Neither party may assign the Contract, or assign or delegate any of its duties or obligations under the Contract, to any other party (whether by operation of law or otherwise), without the prior written consent of the other party; provided, however, that the State may assign the Contract to any other State agency, department, division or department without the prior consent of Contractor and Contractor may assign the Contract to an affiliate so long as the affiliate is adequately capitalized and can provide adequate assurances that the affiliate can perform the Contract. The State may withhold consent from proposed assignments, subcontracts, or novations when the transfer of responsibility would operate to decrease the State's likelihood of receiving performance on the Contract or the State's ability to recover damages.

Contractor may not, without the prior written approval of the State, assign its right to receive payments due under the Contract. If the State permits an assignment, the Contractor is not relieved of its responsibility to perform any of its contractual duties and the requirement under the Contract that all payments must be made to one entity continues.

If the Contractor intends to assign the contract or any of the Contractor's rights or duties under the Contract, the Contractor must notify the State in writing at least 90 days before the assignment. The Contractor also must provide the State with adequate information about the assignee within a reasonable amount of time before the assignment for the State to determine whether to approve the assignment.

2.030 General Provisions**2.031 Media Releases**

News releases (including promotional literature and commercial advertisements) pertaining to the RFP and Contract or project to which it relates shall not be made without prior written State approval, and then only in accordance with the explicit written instructions from the State. No results of the activities associated with the RFP and Contract are to be released without prior written approval of the State and then only to persons designated.

2.032 Contract Distribution

Purchasing Operations retains the sole right of Contract distribution to all State agencies and local units of government unless other arrangements are authorized by Purchasing Operations.

2.033 Permits

Contractor must obtain and pay any associated costs for all required governmental permits, licenses and approvals for the delivery, installation and performance of the Services. The State shall pay for all costs and expenses incurred in obtaining and maintaining any necessary easements or right of way.

2.034 Website Incorporation

The State is not bound by any content on the Contractor's website, even if the Contractor's documentation specifically referenced that content and attempts to incorporate it into any other communication, unless the State has actual knowledge of the content and has expressly agreed to be bound by it in a writing that has been manually signed by an authorized representative of the State.

2.035 Future Bidding Preclusion

Contractor acknowledges that, to the extent this Contract involves the creation, research, investigation or generation of a future RFP; it may be precluded from bidding on the subsequent RFP. The State reserves the right to disqualify any Contractor if the State determines that the Contractor has used its position (whether as an incumbent Contractor, or as a Contractor hired to assist with the RFP development, or as a Vendor offering free assistance) to gain a competitive advantage on the RFP



2.036 Freedom of Information

All information in any proposal submitted to the State by Contractor and this Contract is subject to the provisions of the Michigan Freedom of Information Act, 1976 Public Act No. 442, as amended, MCL 15.231, et seq (the "FOIA").

2.037 Disaster Recovery

Contractor and the State recognize that the State provides essential services in times of natural or man-made disasters. Therefore, except as so mandated by Federal disaster response requirements, Contractor personnel dedicated to providing Services/Deliverables under this Contract shall provide the State with priority service for repair and work around in the event of a natural or man-made disaster.

2.040 Financial Provisions

2.041 Fixed Prices for Services/Deliverables

Each Statement of Work or Purchase Order issued under this Contract shall specify (or indicate by reference to the appropriate Contract Exhibit) the firm, fixed prices for all Services/Deliverables, and the associated payment milestones and payment amounts. The State may make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts approved by the Contract Administrator, after negotiation. Contractor shall show verification of measurable progress at the time of requesting progress payments.

2.042 Adjustments for Reductions in Scope of Services/Deliverables

If the scope of the Services/Deliverables under any Statement of Work issued under this Contract is subsequently reduced by the State, the parties shall negotiate an equitable reduction in Contractor's charges under such Statement of Work commensurate with the reduction in scope.

2.043 Services/Deliverables Covered

The State shall not be obligated to pay any amounts in addition to the charges specified in this Contract for all Services/Deliverables to be provided by Contractor and its subcontractors, if any, under this Contract,.

2.044 Invoicing and Payment – In General

- (a) Each Statement of Work issued under this Contract shall list (or indicate by reference to the appropriate Contract Exhibit) the prices for all Services/Deliverables, equipment and commodities to be provided, and the associated payment milestones and payment amounts.
- (b) Each Contractor invoice shall show details as to charges by Service/Deliverable component and location at a level of detail reasonably necessary to satisfy the State's accounting and charge-back requirements. Invoices for Services performed on a time and materials basis shall show, for each individual, the number of hours of Services performed during the billing period, the billable skill/labor category for such person and the applicable hourly billing rate. Prompt payment by the State is contingent on the Contractor's invoices showing the amount owed by the State minus any holdback amount to be retained by the State in accordance with **Section 1.600**.
- (c) Correct invoices shall be due and payable by the State, in accordance with the State's standard payment procedure as specified in 1984 Public Act No. 279, MCL 17.51 et seq., within 45 days after receipt, provided the State determines that the invoice was properly rendered.
- (d) All invoices should reflect actual work done. Specific details of invoices and payments shall be agreed upon between the Contract Administrator and the Contractor after the proposed Contract Agreement has been signed and accepted by both the Contractor and the Director of Purchasing Operations, Department of Management & Budget. This activity shall occur only upon the specific written direction from Purchasing Operations.

The specific payment schedule for any Contract(s) entered into, as the State and the Contractor(s) shall mutually agree upon. The schedule should show payment amount and should reflect actual work done by the payment dates, less any penalty cost charges accrued by those dates. As a general policy statements shall be forwarded to the designated representative by the 15th day of the following month.



The Government may make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts approved by the Contract Administrator, after negotiation. Contractor must show verification of measurable progress at the time of requesting progress payments.

2.045 Pro-ration

To the extent there are Services that are to be paid for on a monthly basis, the cost of such Services shall be pro-rated for any partial month.

2.046 Antitrust Assignment

The Contractor assigns to the State any claim for overcharges resulting from antitrust violations to the extent that those violations concern materials or services supplied by third parties to the Contractor, toward fulfillment of this Contract.

2.047 Final Payment

The making of final payment by the State to Contractor does not constitute a waiver by either party of any rights or other claims as to the other party's continuing obligations under the Contract, nor shall it constitute a waiver of any claims by one party against the other arising from unsettled claims or failure by a party to comply with this Contract, including claims for Services and Deliverables not reasonably known until after acceptance to be defective or substandard. Contractor's acceptance of final payment by the State under this Contract shall constitute a waiver of all claims by Contractor against the State for payment under this Contract, other than those claims previously filed in writing on a timely basis and still unsettled.

2.048 Electronic Payment Requirement

Electronic transfer of funds is required for payments on State Contracts. Contractors are required to register with the State electronically at <http://www.cpexpress.state.mi.us>. As stated in Public Act 431 of 1984, all contracts that the State enters into for the purchase of goods and services shall provide that payment shall be made by electronic fund transfer (EFT).

2.050 Taxes

2.051 Employment Taxes

Contractor shall collect and pay all applicable federal, state, and local employment taxes, including the taxes.

2.052 Sales and Use Taxes

Contractor shall register and remit sales and use taxes on taxable sales of tangible personal property or services delivered into the State. Contractors that lack sufficient presence in Michigan to be required to register and pay tax must do so as a volunteer. This requirement extends to: (1) all members of any controlled group as defined in § 1563(a) of the Internal Revenue Code and applicable regulations of which the company is a member, and (2) all organizations under common control as defined in § 414(c) of the Internal Revenue Code and applicable regulations of which the company is a member that make sales at retail for delivery into the State are registered with the State for the collection and remittance of sales and use taxes. In applying treasury regulations defining "two or more trades or businesses under common control" the term "organization" means sole proprietorship, a partnership (as defined in § 701(a) (2) of the Internal Revenue Code), a trust, an estate, a corporation, or a limited liability company.

2.060 Contract Management

2.061 Contractor Personnel Qualifications

All persons assigned by Contractor to the performance of Services under this Contract must be employees of Contractor or its majority-owned (directly or indirectly, at any tier) subsidiaries (or a State-approved subcontractor) and must be fully qualified to perform the work assigned to them. Contractor must include a similar provision in any subcontract entered into with a subcontractor. For the purposes of this Contract,



independent Contractors engaged by Contractor solely in a staff augmentation role must be treated by the State as if they were employees of Contractor for this Contract only; however, the State understands that the relationship between Contractor and subcontractor is an independent Contractor relationship.

2.062 Contractor Key Personnel

- (a) The Contractor must provide the Contract Compliance Inspector with the names of the Key Personnel.
- (b) Key Personnel must be dedicated as defined in the Statement of Work to the Project for its duration in the applicable Statement of Work with respect to other individuals designated as Key Personnel for that Statement of Work.
- (c) The State shall have the right to recommend and approve in writing the initial assignment, as well as any proposed reassignment or replacement, of any Key Personnel. Before assigning an individual to any Key Personnel position, Contractor shall notify the State of the proposed assignment, shall introduce the individual to the appropriate State representatives, and shall provide the State with a resume and any other information about the individual reasonably requested by the State. The State reserves the right to interview the individual before granting written approval. In the event the State finds a proposed individual unacceptable, the State shall provide a written explanation including reasonable detail outlining the reasons for the rejection.
- (d) Contractor must not remove any Key Personnel from their assigned roles on the Contract without the prior written consent of the State. The Contractor's removal of Key Personnel without the prior written consent of the State is an unauthorized removal ("Unauthorized Removal"). Unauthorized Removals does not include replacing Key Personnel for reasons beyond the reasonable control of Contractor, including illness, disability, leave of absence, personal emergency circumstances, resignation or for cause termination of the Key Personnel's employment. Unauthorized Removals does not include replacing Key Personnel because of promotions or other job movements allowed by Contractor personnel policies or Collective Bargaining Agreement(s) as long as the State receives prior written notice before shadowing occurs and Contractor provides 30 days of shadowing unless parties agree to a different time period. The Contractor with the State must review any Key Personnel replacements, and appropriate transition planning will be established. Any Unauthorized Removal may be considered by the State to be a material breach of the Contract, in respect of which the State may elect to exercise its termination and cancellation rights.
- (e) The Contractor must notify the Contract Compliance Inspector and the Contract Administrator at least 10 business days before redeploying non-Key Personnel, who are dedicated to primarily to the Project, to other projects. If the State does not object to the redeployment by its scheduled date, the Contractor may then redeploy the non-Key Personnel.

2.063 Re-assignment of Personnel at the State's Request

The State reserves the right to require the removal from the Project of Contractor personnel found, in the judgment of the State, to be unacceptable. The State's request must be written with reasonable detail outlining the reasons for the removal request. Additionally, the State's request must be based on legitimate, good faith reasons. Replacement personnel for the removed person must be fully qualified for the position. If the State exercises this right, and the Contractor cannot immediately replace the removed personnel, the State agrees to an equitable adjustment in schedule or other terms that may be affected by the State's required removal. If any incident with removed personnel results in delay not reasonably anticipatable under the circumstances and which is attributable to the State, the applicable SLAs for the affected Service shall not be counted for a time as agreed to by the parties.

2.064 Contractor Personnel Location

All staff assigned by Contractor to work on the Contract shall perform their duties either primarily at Contractor's offices and facilities or at State facilities. Without limiting the generality of the foregoing, Key Personnel shall, at a minimum, spend at least the amount of time on-site at State facilities as indicated in the applicable Statement of Work. Subject to availability, selected Contractor personnel may be assigned office space to be shared with State personnel.

**2.065 Contractor Identification**

Contractor employees must be clearly identifiable while on State property by wearing a State-issued badge, as required. Contractor employees are required to clearly identify themselves and the company they work for whenever making contact with State personnel by telephone or other means.

2.066 Cooperation with Third Parties

Contractor agrees to cause its personnel and the personnel of any subcontractors to cooperate with the State and its agents and other Contractors including the State's Quality Assurance personnel. As reasonably requested by the State in writing, the Contractor shall provide to the State's agents and other Contractors reasonable access to Contractor's Project personnel, systems and facilities to the extent the access relates to activities specifically associated with this Contract and shall not interfere or jeopardize the safety or operation of the systems or facilities. The State acknowledges that Contractor's time schedule for the Contract is very specific and agrees not to unnecessarily or unreasonably interfere with, delay or otherwise impeded Contractor's performance under this Contract with the requests for access.

2.067 Contract Management Responsibilities

Contractor shall be responsible for all acts and omissions of its employees, as well as the acts and omissions of any other personnel furnished by Contractor to perform the Services. Contractor shall have overall responsibility for managing and successfully performing and completing the Services/Deliverables, subject to the overall direction and supervision of the State and with the participation and support of the State as specified in this Contract. Contractor's duties shall include monitoring and reporting the State's performance of its participation and support responsibilities (as well as Contractor's own responsibilities) and providing timely notice to the State in Contractor's reasonable opinion if the State's failure to perform its responsibilities in accordance with the Project Plan is likely to delay the timely achievement of any Contract tasks.

The Contractor shall provide the Services/Deliverables directly or through its affiliates, subsidiaries, subcontractors or resellers. Regardless of the entity providing the Service/Deliverable, the Contractor shall act as a single point of contact coordinating these entities to meet the State's need for Services/Deliverables. Nothing in this Contract, however, shall be construed to authorize or require any party to violate any applicable law or regulation in its performance of this Contract.

2.068 Contractor Return of State Equipment/Resources

The Contractor shall return to the State any State-furnished equipment, facilities and other resources when no longer required for the Contract in the same condition as when provided by the State, reasonable wear and tear excepted.

2.070 Subcontracting by Contractor**2.071 Contractor full Responsibility**

Contractor shall have full responsibility for the successful performance and completion of all of the Services and Deliverables. The State shall consider Contractor to be the sole point of contact with regard to all contractual matters under this Contract, including payment of any and all charges for Services and Deliverables.

2.072 State Consent to delegation

Contractor shall not delegate any duties under this Contract to a subcontractor unless the Department of Technology, Management and Budget, Purchasing Operations has given written consent to such delegation. The State shall have the right of prior written approval of all subcontractors and to require Contractor to replace any subcontractors found, in the reasonable judgment of the State, to be unacceptable. The State's request shall be written with reasonable detail outlining the reasons for the removal request. Additionally, the State's request shall be based on legitimate, good faith reasons. Replacement subcontractor(s) for the removed subcontractor shall be fully qualified for the position. If the State exercises this right, and the Contractor cannot immediately replace the removed subcontractor, the State shall agree to an equitable adjustment in schedule or other terms that may be affected by the State's required removal. If any such incident with a removed subcontractor results in delay not reasonable anticipatable under the circumstances and which is attributable to the State, the applicable SLA for the affected Work shall not be counted for a time agreed upon by the parties.



2.073 Subcontractor bound to Contract

In any subcontracts entered into by Contractor for the performance of the Services, Contractor shall require the subcontractor, to the extent of the Services to be performed by the subcontractor, to be bound to Contractor by the terms of this Contract and to assume toward Contractor all of the obligations and responsibilities that Contractor, by this Contract, assumes toward the State. The State reserves the right to receive copies of and review all subcontracts, although Contractor may delete or mask any proprietary information, including pricing, contained in such contracts before providing them to the State. The management of any subcontractor shall be the responsibility of Contractor, and Contractor shall remain responsible for the performance of its subcontractors to the same extent as if Contractor had not subcontracted such performance. Contractor shall make all payments to subcontractors or suppliers of Contractor. Except as otherwise agreed in writing by the State and Contractor, the State shall not be obligated to direct payments for the Services other than to Contractor. The State's written approval of any subcontractor engaged by Contractor to perform any obligation under this Contract shall not relieve Contractor of any obligations or performance required under this Contract. A list of the subcontractors, if any, approved by the State as of the execution of this Contract, together with a copy of the applicable subcontract is attached.

2.074 Flow Down

Except where specifically approved in writing by the State on a case-by-case basis, Contractor shall flow down the obligations in **Sections 2.031, 2.060, 2.100, 2.110, 2.120, 2.130, and 2.200** in all of its agreements with any subcontractors.

2.075 Competitive Selection

The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the Contract.

2.080 State Responsibilities

2.081 Equipment

The State shall provide only the equipment and resources identified in the Statement of Work and other Contract Exhibits.

2.082 Facilities

The State must designate space as long as it is available and as provided in the Statement of Work, to house the Contractor's personnel whom the parties agree will perform the Services/Deliverables at State facilities (collectively, the "State Facilities"). The Contractor shall have reasonable access to, and unless agreed otherwise by the parties in writing must observe and comply with all rules and regulations relating to each of the State Facilities (including hours of operation) used by the Contractor in the course of providing the Services. Contractor agrees that it shall not, without the prior written consent of the State, use any State Facilities or access any State information systems provided for the Contractor's use, or to which the Contractor otherwise gains access in the course of performing the Services, for any purpose other than providing the Services to the State.

2.090 Security

2.091 Background Checks

On a case-by-case basis, the State may investigate the Contractor's personnel before they may have access to State facilities and systems. The scope of the background check is at the discretion of the State and the results shall be used to determine Contractor personnel eligibility for working within State facilities and systems. The investigations shall include Michigan State Police Background checks (ICHAT) and may include the National Crime Information Center (NCIC) Finger Prints. Proposed Contractor personnel may be required to complete and submit an RI-8 Fingerprint Card for the NCIC Finger Print Check. Any request for background checks shall be initiated by the State and shall be reasonably related to the type of work requested.



All Contractor personnel shall also be expected to comply with the State's security and acceptable use policies for State IT equipment and resources. See <http://www.michigan.gov/dit>. Furthermore, Contractor personnel shall be expected to agree to the State's security and acceptable use policies before the Contractor personnel shall be accepted as a resource to perform work for the State. It is expected the Contractor shall present these documents to the prospective employee before the Contractor presents the individual to the State as a proposed resource. Contractor staff shall be expected to comply with all Physical Security procedures in place within the facilities where they are working.

2.092 Security Breach Notification

If the Contractor breaches this Section, the Contractor must (i) promptly cure any deficiencies and (ii) comply with any applicable federal and state laws and regulations pertaining to unauthorized disclosures. Contractor and the State shall cooperate to mitigate, to the extent practicable, the effects of any breach, intrusion, or unauthorized use or disclosure. Contractor must report to the State in writing any use or disclosure of Confidential Information, whether suspected or actual, other than as provided for by the Contract within 10 days of becoming aware of the use or disclosure or the shorter time period as is reasonable under the circumstances.

2.093 PCI DATA Security Requirements - Reserved

2.100 Confidentiality

2.101 Confidentiality

Contractor and the State each acknowledge that the other possesses and shall continue to possess confidential information that has been developed or received by it. As used in this Section, "Confidential Information" of Contractor must mean all non-public proprietary information of Contractor (other than Confidential Information of the State as defined below), which is marked confidential, restricted, proprietary, or with a similar designation. "Confidential Information" of the State must mean any information which is retained in confidence by the State (or otherwise required to be held in confidence by the State under applicable federal, state and local laws and regulations) or which, in the case of tangible materials provided to Contractor by the State under its performance under this Contract, is marked as confidential, proprietary or with a similar designation by the State. "Confidential Information" excludes any information (including this Contract) that is publicly available under the Michigan FOIA.

2.102 Protection and Destruction of Confidential Information

The State and Contractor shall each use at least the same degree of care to prevent disclosing to third parties the Confidential Information of the other as it employs to avoid unauthorized disclosure, publication or dissemination of its own confidential information of like character, but in no event less than reasonable care. Neither Contractor nor the State shall (i) make any use of the Confidential Information of the other except as contemplated by this Contract, (ii) acquire any right in or assert any lien against the Confidential Information of the other, or (iii) if requested to do so, refuse for any reason to promptly return the other party's Confidential Information to the other party. Each party shall limit disclosure of the other party's Confidential Information to employees and subcontractors who must have access to fulfill the purposes of this Contract. Disclosure to, and use by, a subcontractor is permissible where (A) use of a subcontractor is authorized under this Contract, (B) the disclosure is necessary or otherwise naturally occurs in connection with work that is within the subcontractor's scope of responsibility, and (C) Contractor obligates the subcontractor in a written Contract to maintain the State's Confidential Information in confidence. At the State's request, any employee of Contractor and of any subcontractor having access or continued access to the State's Confidential Information may be required to execute an acknowledgment that the employee has been advised of Contractor's and the subcontractor's obligations under this Section and of the employee's obligation to Contractor or subcontractor, as the case may be, to protect the Confidential Information from unauthorized use or disclosure.

Promptly upon termination or cancellation of the Contract for any reason, Contractor must certify to the State that Contractor has destroyed all State Confidential Information.



2.103 Exclusions

Notwithstanding the foregoing, the provisions in this Section shall not apply to any particular information which the State or Contractor can demonstrate (i) was, at the time of disclosure to it, in the public domain; (ii) after disclosure to it, is published or otherwise becomes part of the public domain through no fault of the receiving party; (iii) was in the possession of the receiving party at the time of disclosure to it without an obligation of confidentiality; (iv) was received after disclosure to it from a third party who had a lawful right to disclose the information to it without any obligation to restrict its further disclosure; or (v) was independently developed by the receiving party without reference to Confidential Information of the furnishing party. Further, the provisions of this Section shall not apply to any particular Confidential Information to the extent the receiving party is required by law to disclose the Confidential Information, provided that the receiving party (i) promptly provides the furnishing party with notice of the legal request, and (ii) assists the furnishing party in resisting or limiting the scope of the disclosure as reasonably requested by the furnishing party.

2.104 No Implied Rights

Nothing contained in this Section must be construed as obligating a party to disclose any particular Confidential Information to the other party, or as granting to or conferring on a party, expressly or impliedly, any right or license to the Confidential Information of the other party.

2.105 Respective Obligations

The parties' respective obligations under this Section must survive the termination or expiration of this Contract for any reason.

2.110 Records and Inspections

2.111 Inspection of Work Performed

The State's authorized representatives shall at all reasonable times and with 10 days prior written request, have the right to enter Contractor's premises, or any other places, where the Services are being performed, and shall have access, upon reasonable request, to interim drafts of Deliverables or work-in-progress. Upon 10 Days prior written notice and at all reasonable times, the State's representatives shall be allowed to inspect, monitor, or otherwise evaluate the work being performed and to the extent that the access will not reasonably interfere or jeopardize the safety or operation of the systems or facilities. Contractor shall provide all reasonable facilities and assistance for the State's representatives.

2.112 Examination of Records

For seven years after the Contractor provides any work under this Contract (the "Audit Period"), the State may examine and copy any of Contractor's books, records, documents and papers pertinent to establishing Contractor's compliance with the Contract and with applicable laws and rules. The State shall notify the Contractor 20 days before examining the Contractor's books and records. The State does not have the right to review any information deemed confidential by the Contractor to the extent access would require the confidential information to become publicly available. This provision also applies to the books, records, accounts, documents and papers, in print or electronic form, of any parent, affiliated or subsidiary organization of Contractor, or any subcontractor of Contractor performing services in connection with the Contract.

2.113 Retention of Records

Contractor shall maintain at least until the end of the Audit Period all pertinent financial and accounting records (including time sheets and payroll records, and information pertaining to the Contract and to the Services, equipment, and commodities provided under the Contract) pertaining to the Contract according to generally accepted accounting principles and other procedures specified in this Section. Financial and accounting records shall be made available, upon request, to the State at any time during the Audit Period. If an audit, litigation, or other action involving Contractor's records is initiated before the end of the Audit Period, the records shall be retained until all issues arising out of the audit, litigation, or other action are resolved or until the end of the Audit Period, whichever is later.



2.114 Audit Resolution

If necessary, the Contractor and the State shall meet to review each audit report promptly after issuance. The Contractor shall respond to each audit report in writing within 30 days from receipt of the report, unless a shorter response time is specified in the report. The Contractor and the State shall develop, agree upon and monitor an action plan to promptly address and resolve any deficiencies, concerns, and/or recommendations in the audit report.

2.115 Errors

If the audit demonstrates any errors in the documents provided to the State, then the amount in error shall be reflected as a credit or debit on the next invoice and in subsequent invoices until the amount is paid or refunded in full. However, a credit or debit may not be carried for more than four invoices. If a balance remains after four invoices, then the remaining amount shall be due as a payment or refund within 45 days of the last quarterly invoice that the balance appeared on or termination of the contract, whichever is earlier.

In addition to other available remedies, the difference between the payment received and the correct payment amount is greater than 10%, then the Contractor shall pay all of the reasonable costs of the audit.

2.120 Warranties

2.121 Warranties and Representations

The Contractor represents and warrants:

- (a) It is capable in all respects of fulfilling and must fulfill all of its obligations under this Contract. The performance of all obligations under this Contract must be provided in a timely, professional, and workman-like manner and must meet the performance and operational standards required under this Contract.
- (b) The Contract Appendices, Attachments and Exhibits identify the equipment and software and services necessary for the Deliverable(s) to perform and Services to operate in compliance with the Contract's requirements and other standards of performance.
- (c) It is the lawful owner or licensee of any Deliverable licensed or sold to the State by Contractor or developed by Contractor under this Contract, and Contractor has all of the rights necessary to convey to the State the ownership rights or licensed use, as applicable, of any and all Deliverables. None of the Deliverables provided by Contractor to the State under neither this Contract, nor their use by the State shall infringe the patent, copyright, trade secret, or other proprietary rights of any third party.
- (d) If, under this Contract, Contractor procures any equipment, software or other Deliverable for the State (including equipment, software and other Deliverables manufactured, re-marketed or otherwise sold by Contractor under Contractor's name), then in addition to Contractor's other responsibilities with respect to the items in this Contract, Contractor must assign or otherwise transfer to the State or its designees, or afford the State the benefits of, any manufacturer's warranty for the Deliverable.
- (e) The contract signatory has the power and authority, including any necessary corporate authorizations, necessary to enter into this Contract, on behalf of Contractor.
- (f) It is qualified and registered to transact business in all locations where required.
- (g) Neither the Contractor nor any Affiliates, nor any employee of either, has, must have, or must acquire, any contractual, financial, business, or other interest, direct or indirect, that would conflict in any manner or degree with Contractor's performance of its duties and responsibilities to the State under this Contract or otherwise create an appearance of impropriety with respect to the award or performance of this Agreement. Contractor must notify the State about the nature of the conflict or appearance of impropriety within two days of learning about it.
- (h) Neither Contractor nor any Affiliates, nor any employee of either has accepted or must accept anything of value based on an understanding that the actions of the Contractor or Affiliates or employee on behalf of the State would be influenced. Contractor must not attempt to influence any State employee by the direct or indirect offer of anything of value.
- (i) Neither Contractor nor any Affiliates, nor any employee of either has paid or agreed to pay any person, other than bona fide employees and consultants working solely for Contractor or the Affiliate, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract.



- (j) The prices proposed by Contractor were arrived at independently, without consultation, communication, or agreement with any other Contractor for the purpose of restricting competition; the prices quoted were not knowingly disclosed by Contractor to any other Contractor; and no attempt was made by Contractor to induce any other person to submit or not submit a proposal for the purpose of restricting competition.
- (k) All financial statements, reports, and other information furnished by Contractor to the State as part of its response to the RFP or otherwise in connection with the award of this Contract fairly and accurately represent the business, properties, financial condition, and results of operations of Contractor as of the respective dates, or for the respective periods, covered by the financial statements, reports, other information. Since the respective dates or periods covered by the financial statements, reports, or other information, there have been no material adverse changes in the business, properties, financial condition, or results of operations of Contractor.
- (l) All written information furnished to the State by or for the Contractor in connection with this Contract, including its bid, is true, accurate, and complete, and contains no untrue statement of material fact or omits any material fact necessary to make the information not misleading.
- (m) It is not in material default or breach of any other contract or agreement that it may have with the State or any of its departments, commissions, boards, or agencies. Contractor further represents and warrants that it has not been a party to any contract with the State or any of its departments that was terminated by the State or the department within the previous five years for the reason that Contractor failed to perform or otherwise breached an obligation of the contract.
- (n) If any of the certifications, representations, or disclosures made in the Contractor's original bid response change after contract award, the Contractor is required to report those changes immediately to the Department of Technology, Management and Budget, Purchasing Operations.

2.122 Warranty of Merchantability

Goods provided by Contractor under this agreement shall be merchantable. All goods provided under this Contract shall be of good quality within the description given by the State, shall be fit for their ordinary purpose, shall be adequately contained and packaged within the description given by the State, shall conform to the agreed upon specifications, and shall conform to the affirmations of fact made by the Contractor or on the container or label.

2.123 Warranty of Fitness for a Particular Purpose

When the Contractor has reason to know or knows any particular purpose for which the goods are required, and the State is relying on the Contractor's skill or judgment to select or furnish suitable goods, there is a warranty that the goods are fit for such purpose.

2.124 Warranty of Title

Contractor shall, in providing goods to the State, convey good title in those goods, whose transfer is right and lawful. All goods provided by Contractor shall be delivered free from any security interest, lien, or encumbrance of which the State, at the time of contracting, has no knowledge. Goods provided by Contractor, under this Contract, shall be delivered free of any rightful claim of any third person by of infringement or the like.

2.125 Equipment Warranty

To the extent Contractor is responsible under this Contract for maintaining equipment/system(s), Contractor represents and warrants that it shall maintain the equipment/system(s) in good operating condition and shall undertake all repairs and preventive maintenance according to the applicable manufacturer's recommendations for the period specified in this Contract.

The Contractor represents and warrants that the equipment/system(s) are in good operating condition and operates and performs to the requirements and other standards of performance contained in this Contract, when installed, at the time of Final Acceptance by the State, and for a period of (1) one year commencing upon the first day following Final Acceptance.



Within 3 business days of notification from the State, the Contractor must adjust, repair or replace all equipment that is defective or not performing in compliance with the Contract. The Contractor must assume all costs for replacing parts or units and their installation including transportation and delivery fees, if any.

The Contractor must provide a toll-free telephone number to allow the State to report equipment failures and problems to be remedied by the Contractor.

The Contractor agrees that all warranty service it provides under this Contract must be performed by Original Equipment Manufacturer (OEM) trained, certified and authorized technicians.

The Contractor is the sole point of contact for warranty service. The Contractor warrants that it shall pass through to the State any warranties obtained or available from the original equipment manufacturer, including any replacement, upgraded, or additional equipment warranties.

2.126 Equipment to be New

If applicable, all equipment provided under this Contract by Contractor shall be new where Contractor has knowledge regarding whether the equipment is new or assembled from new or serviceable used parts that are like new in performance or has the option of selecting one or the other. Equipment that is assembled from new or serviceable used parts that are like new in performance is acceptable where Contractor does not have knowledge or the ability to select one or other, unless specifically agreed otherwise in writing by the State.

2.127 Prohibited Products

The State will not accept salvage, distressed, outdated or discontinued merchandise. Shipping of such merchandise to any State agency, as a result of an order placed against the Contract, shall be considered default by the Contractor of the terms and conditions of the Contract and may result in cancellation of the Contract by the State. The brand and product number offered for all items shall remain consistent for the term of the Contract, unless Purchasing Operations has approved a change order pursuant to **Section 2.024**.

2.128 Consequences for Breach

In addition to any remedies available in law, if the Contractor breaches any of the warranties contained in this section, the breach may be considered as a default in the performance of a material obligation of this Contract.

2.130 Insurance

2.131 Liability Insurance

The Contractor must provide proof of the minimum levels of insurance coverage as indicated below. The insurance must protect the State from claims that may arise out of or result from the Contractor's performance of services under the terms of this Contract, whether the services are performed by the Contractor, or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.

The Contractor waives all rights against the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents for recovery of damages to the extent these damages are covered by the insurance policies the Contractor is required to maintain under this Contract.

All insurance coverage provided relative to this Contract/Purchase Order is PRIMARY and NON-CONTRIBUTING to any comparable liability insurance (including self-insurances) carried by the State.

The insurance must be written for not less than any minimum coverage specified in this Contract or required by law, whichever is greater.

The insurers selected by Contractor must have an A.M. Best rating of A or better, or as otherwise approved in writing by the State, or if the ratings are no longer available, with a comparable rating from a recognized insurance rating agency. All policies of insurance required in this Contract must be issued by companies that have been approved to do business in the State.

See www.michigan.gov/dleg.



Where specific limits are shown, they are the minimum acceptable limits. If Contractor's policy contains higher limits, the State must be entitled to coverage to the extent of the higher limits.

The Contractor is required to pay for and provide the type and amount of insurance checked ☒ below:

- ☒ 1. Commercial General Liability with the following minimum coverage:
 \$2,000,000 General Aggregate Limit other than Products/Completed Operations
 \$2,000,000 Products/Completed Operations Aggregate Limit
 \$1,000,000 Personal & Advertising Injury Limit
 \$1,000,000 Each Occurrence Limit

The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSURED on the Commercial General Liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

- ☒ 2. If a motor vehicle is used to provide services or products under this Contract, the Contractor must have vehicle liability insurance on any auto including owned, hired and non-owned vehicles used in Contractor's business for bodily injury and property damage as required by law.

The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSURED on the vehicle liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

- ☒ 3. Workers' compensation coverage must be provided according to applicable laws governing the employees and employers work activities in the state of the Contractor's domicile. If a self-insurer provides the applicable coverage, proof must be provided of approved self-insured authority by the jurisdiction of domicile. For employees working outside of the state of qualification, Contractor must provide appropriate certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

Any certificates of insurance received must also provide a list of states where the coverage is applicable.

The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company. This provision must not be applicable where prohibited or limited by the laws of the jurisdiction in which the work is to be performed.

- ☒ 4. Employers liability insurance with the following minimum limits:
 \$100,000 each accident
 \$100,000 each employee by disease
 \$500,000 aggregate disease

- ☒ 5. Employee Fidelity, including Computer Crimes, insurance naming the State as a loss payee, providing coverage for direct loss to the State and any legal liability of the State arising out of or related to fraudulent or dishonest acts committed by the employees of Contractor or its subcontractors, acting alone or in collusion with others, in a minimum amount of one million dollars (\$1,000,000.00) with a maximum deductible of fifty thousand dollars (\$50,000.00).

- ☒ 6. Umbrella or Excess Liability Insurance in a minimum amount of ten million dollars (\$10,000,000.00), which must apply, at a minimum, to the insurance required in Subsection 1 (Commercial General Liability) above.

- ☒ 7. Professional Liability (Errors and Omissions) Insurance with the following minimum coverage: three million dollars (\$3,000,000.00) each occurrence and three million dollars (\$3,000,000.00) annual aggregate.



- ☐ 8. Fire and Personal Property Insurance covering against any loss or damage to the office space used by Contractor for any reason under this Contract, and the equipment, software and other contents of the office space, including without limitation, those contents used by Contractor to provide the Services to the State, up to its replacement value, where the office space and its contents are under the care, custody and control of Contractor. The policy must cover all risks of direct physical loss or damage, including without limitation, flood and earthquake coverage and coverage for computer hardware and software. The State must be endorsed on the policy as a loss payee as its interests appear.

2.132 SubContractor Insurance Coverage

Except where the State has approved in writing a Contractor subcontract with other insurance provisions, Contractor must require all of its subcontractors under this Contract to purchase and maintain the insurance coverage as described in this Section for the Contractor in connection with the performance of work by those subcontractors. Alternatively, Contractor may include any subcontractors under Contractor's insurance on the coverage required in this Section. subcontractor(s) must fully comply with the insurance coverage required in this Section. Failure of subcontractor(s) to comply with insurance requirements does not limit Contractor's liability or responsibility.

2.133 Certificates of Insurance and Other Requirements

Contractor must furnish to MDTMB Purchasing Operations, certificate(s) of insurance verifying insurance coverage or providing satisfactory evidence of self-insurance as required in this Section (the "Certificates"). The Certificate must be on the standard "accord" form or equivalent. **The Contract Number or the Purchase Order Number must be shown on the Certificate Of Insurance To Assure Correct Filing.** All Certificate(s) are to be prepared and submitted by the Insurance Provider. All Certificate(s) must contain a provision indicating that coverage afforded under the policies SHALL NOT BE CANCELLED, MATERIALLY CHANGED, OR NOT RENEWED without 30 days prior written notice, except for 10 days for non-payment of premium, having been given to the Director of Purchasing Operations, Department of Technology, Management and Budget. The notice must include the Contract or Purchase Order number affected. Before the Contract is signed, and not less than 20 days before the insurance expiration date every year thereafter, the Contractor must provide evidence that the State and its agents, officers and employees are listed as additional insured under each commercial general liability and commercial automobile liability policy. In the event the State approves the representation of the State by the insurer's attorney, the attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.

The Contractor must maintain all required insurance coverage throughout the term of the Contract and any extensions and, in the case of claims-made Commercial General Liability policies, must secure tail coverage for at least three years following the expiration or termination for any reason of this Contract. The minimum limits of coverage specified above are not intended, and must not be construed; to limit any liability or indemnity of Contractor under this Contract to any indemnified party or other persons. Contractor is responsible for all deductibles with regard to the insurance. If the Contractor fails to pay any premium for required insurance as specified in this Contract, or if any insurer cancels or significantly reduces any required insurance as specified in this Contract without the State's written consent, then the State may, after the State has given the Contractor at least 30 days written notice, pay the premium or procure similar insurance coverage from another company or companies. The State may deduct any part of the cost from any payment due the Contractor, or the Contractor must pay that cost upon demand by the State.

2.140 Indemnification

2.141 General Indemnification

To the extent permitted by law, the Contractor must indemnify, defend and hold harmless the State from liability, including all claims and losses, and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties), accruing or resulting to any person, firm or corporation that may be injured or damaged by the Contractor in the performance of this Contract and that are attributable to the negligence or tortious acts of the Contractor or any of its subcontractors, or by anyone else for whose acts any of them may be liable.

**2.142 Code Indemnification**

To the extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State from any claim, loss, or expense arising from Contractor's breach of the No Surreptitious Code Warranty.

2.143 Employee Indemnification

In any claims against the State of Michigan, its departments, divisions, agencies, sections, commissions, officers, employees and agents, by any employee of the Contractor or any of its subcontractors, the indemnification obligation under the Contract must not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Contractor or any of its subcontractors under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in provisions, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other provisions.

2.144 Patent/Copyright Infringement Indemnification

To the extent permitted by law, the Contractor must indemnify, defend and hold harmless the State from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that the action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Contractor or its subcontractors, or the operation of the equipment, software, commodity or service, or the use or reproduction of any documentation provided with the equipment, software, commodity or service infringes any United States patent, copyright, trademark or trade secret of any person or entity, which is enforceable under the laws of the United States.

In addition, should the equipment, software, commodity, or service, or its operation, become or in the State's or Contractor's opinion be likely to become the subject of a claim of infringement, the Contractor must at the Contractor's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if the option is not reasonably available to the Contractor, (ii) replace or modify to the State's satisfaction the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if the option is not reasonably available to Contractor, (iii) accept its return by the State with appropriate credits to the State against the Contractor's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

Notwithstanding the foregoing, the Contractor has no obligation to indemnify or defend the State for, or to pay any costs, damages or attorneys' fees related to, any claim based upon (i) equipment developed based on written specifications of the State; (ii) use of the equipment in a configuration other than implemented or approved in writing by the Contractor, including, but not limited to, any modification of the equipment by the State; or (iii) the combination, operation, or use of the equipment with equipment or software not supplied by the Contractor under this Contract.

2.145 Continuation of Indemnification Obligations

The Contractor's duty to indemnify under this Section continues in full force and effect, notwithstanding the expiration or early cancellation of the Contract, with respect to any claims based on facts or conditions that occurred before expiration or cancellation.

2.146 Indemnification Procedures

The procedures set forth below must apply to all indemnity obligations under this Contract.

- (a) After the State receives notice of the action or proceeding involving a claim for which it shall seek indemnification, the State must promptly notify Contractor of the claim in writing and take or assist Contractor in taking, as the case may be, any reasonable action to avoid the imposition of a default judgment against Contractor. No failure to notify the Contractor relieves the Contractor of its indemnification obligations except to the extent that the Contractor can prove damages attributable to the



failure. Within 10 days following receipt of written notice from the State relating to any claim, the Contractor must notify the State in writing whether Contractor agrees to assume control of the defense and settlement of that claim (a "Notice of Election"). After notifying Contractor of a claim and before the State receiving Contractor's Notice of Election, the State is entitled to defend against the claim, at the Contractor's expense, and the Contractor will be responsible for any reasonable costs incurred by the State in defending against the claim during that period.

- (b) If Contractor delivers a Notice of Election relating to any claim: (i) the State is entitled to participate in the defense of the claim and to employ counsel at its own expense to assist in the handling of the claim and to monitor and advise the State about the status and progress of the defense; (ii) the Contractor must, at the request of the State, demonstrate to the reasonable satisfaction of the State, the Contractor's financial ability to carry out its defense and indemnity obligations under this Contract; (iii) the Contractor must periodically advise the State about the status and progress of the defense and must obtain the prior written approval of the State before entering into any settlement of the claim or ceasing to defend against the claim and (iv) to the extent that any principles of Michigan governmental or public law may be involved or challenged, the State has the right, at its own expense, to control the defense of that portion of the claim involving the principles of Michigan governmental or public law. But the State may retain control of the defense and settlement of a claim by notifying the Contractor in writing within 10 days after the State's receipt of Contractor's information requested by the State under clause (ii) of this paragraph if the State determines that the Contractor has failed to demonstrate to the reasonable satisfaction of the State the Contractor's financial ability to carry out its defense and indemnity obligations under this Section. Any litigation activity on behalf of the State, or any of its subdivisions under this Section, must be coordinated with the Department of Attorney General. In the event the insurer's attorney represents the State under this Section, the insurer's attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.
- (c) If Contractor does not deliver a Notice of Election relating to any claim of which it is notified by the State as provided above, the State may defend the claim in the manner as it may deem appropriate, at the cost and expense of Contractor. If it is determined that the claim was one against which Contractor was required to indemnify the State, upon request of the State, Contractor must promptly reimburse the State for all the reasonable costs and expenses.

2.150 Termination/Cancellation

2.151 Notice and Right to Cure

If the Contractor breaches the contract, and the State in its sole discretion determines that the breach is curable, then the State shall provide the Contractor with written notice of the breach and a time period (not less than 30 days) to cure the Breach. The notice of breach and opportunity to cure is inapplicable for successive or repeated breaches or if the State determines in its sole discretion that the breach poses a serious and imminent threat to the health or safety of any person or the imminent loss, damage, or destruction of any real or tangible personal property.

2.152 Termination for Cause

- (a) The State may terminate this contract, for cause, by notifying the Contractor in writing, if the Contractor (i) breaches any of its material duties or obligations under this Contract (including a Chronic Failure to meet any particular SLA), or (ii) fails to cure a breach within the time period specified in the written notice of breach provided by the State
- (b) If this Contract is terminated for cause, the Contractor must pay all costs incurred by the State in terminating this Contract, including but not limited to, State administrative costs, reasonable attorneys' fees and court costs, and any reasonable additional costs the State may incur to procure the Services/Deliverables required by this Contract from other sources. Re-procurement costs are not consequential, indirect or incidental damages, and cannot be excluded by any other terms otherwise included in this Contract, provided the costs are not in excess of 50% more than the prices for the Service/Deliverables provided under this Contract.



- (c) If the State chooses to partially terminate this Contract for cause, charges payable under this Contract shall be equitably adjusted to reflect those Services/Deliverables that are terminated and the State must pay for all Services/Deliverables for which Final Acceptance has been granted provided up to the termination date. Services and related provisions of this Contract that are terminated for cause must cease on the effective date of the termination.
- (d) If the State terminates this Contract for cause under this Section, and it is determined, for any reason, that Contractor was not in breach of contract under the provisions of this section, that termination for cause must be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties must be limited to that otherwise provided in this Contract for a termination for convenience.

2.153 Termination for Convenience

The State may terminate this Contract for its convenience, in whole or part, if the State determines that a termination is in the State's best interest. Reasons for the termination must be left to the sole discretion of the State and may include, but not necessarily be limited to (a) the State no longer needs the Services or products specified in the Contract, (b) relocation of office, program changes, changes in laws, rules, or regulations make implementation of the Services no longer practical or feasible, (c) unacceptable prices for Additional Services or New Work requested by the State, or (d) falsification or misrepresentation, by inclusion or non-inclusion, of information material to a response to any RFP issued by the State. The State may terminate this Contract for its convenience, in whole or in part, by giving Contractor written notice at least 30 days before the date of termination. If the State chooses to terminate this Contract in part, the charges payable under this Contract must be equitably adjusted to reflect those Services/Deliverables that are terminated. Services and related provisions of this Contract that are terminated for convenience must cease on the effective date of the termination.

2.154 Termination for Non-Appropriation

- (a) Contractor acknowledges that, if this Contract extends for several fiscal years, continuation of this Contract is subject to appropriation or availability of funds for this Contract. If funds to enable the State to effect continued payment under this Contract are not appropriated or otherwise made available, the State must terminate this Contract and all affected Statements of Work, in whole or in part, at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to Contractor. The State must give Contractor at least 30 days advance written notice of termination for non-appropriation or unavailability (or the time as is available if the State receives notice of the final decision less than 30 days before the funding cutoff).
- (b) If funding for the Contract is reduced by law, or funds to pay Contractor for the agreed-to level of the Services or production of Deliverables to be provided by Contractor are not appropriated or otherwise unavailable, the State may, upon 30 days written notice to Contractor, reduce the level of the Services or change the production of Deliverables in the manner and for the periods of time as the State may elect. The charges payable under this Contract shall be equitably adjusted to reflect any equipment, services or commodities not provided by reason of the reduction.
- (c) If the State terminates this Contract, eliminates certain Deliverables, or reduces the level of Services to be provided by Contractor under this Section, the State must pay Contractor for all Work-in-Process performed through the effective date of the termination or reduction in level, as the case may be and as determined by the State, to the extent funds are available. This Section shall not preclude Contractor from reducing or stopping Services/Deliverables or raising against the State in a court of competent jurisdiction, any claim for a shortfall in payment for Services performed or Deliverables finally accepted before the effective date of termination.

2.155 Termination for Criminal Conviction

The State may terminate this Contract immediately and without further liability or penalty in the event Contractor, an officer of Contractor, or an owner of a 25% or greater share of Contractor is convicted of a criminal offense related to a State, public or private Contract or subcontract.



2.156 Termination for Approvals Rescinded

The State may terminate this Contract if any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services under Constitution 1963, Article 11, § 5, and Civil Service Rule 7-1. In that case, the State shall pay the Contractor for only the work completed to that point under the Contract. Termination may be in whole or in part and may be immediate as of the date of the written notice to Contractor or may be effective as of the date stated in the written notice.

2.157 Rights and Obligations upon Termination

- (a) If the State terminates this Contract for any reason, the Contractor must (a) stop all work as specified in the notice of termination, (b) take any action that may be necessary, or that the State may direct, for preservation and protection of Deliverables or other property derived or resulting from this Contract that may be in Contractor's possession, (c) return all materials and property provided directly or indirectly to Contractor by any entity, agent or employee of the State, (d) transfer title in, and deliver to, the State, unless otherwise directed, all Deliverables intended to be transferred to the State at the termination of the Contract and which are resulting from the Contract (which must be provided to the State on an "As-Is" basis except to the extent the amounts paid by the State in respect of the items included compensation to Contractor for the provision of warranty services in respect of the materials), and (e) take any action to mitigate and limit any potential damages, or requests for Contractor adjustment or termination settlement costs, to the maximum practical extent, including terminating or limiting as otherwise applicable those subcontracts and outstanding orders for material and supplies resulting from the terminated Contract.
- (b) If the State terminates this Contract before its expiration for its own convenience, the State must pay Contractor for all charges due for Services provided before the date of termination and, if applicable, as a separate item of payment under this Contract, for Work In Process, on a percentage of completion basis at the level of completion determined by the State. All completed or partially completed Deliverables prepared by Contractor under this Contract, at the option of the State, becomes the State's property, and Contractor is entitled to receive equitable fair compensation for the Deliverables. Regardless of the basis for the termination, the State is not obligated to pay, or otherwise compensate, Contractor for any lost expected future profits, costs or expenses incurred with respect to Services not actually performed for the State.
- (c) Upon a good faith termination, the State may assume, at its option, any subcontracts and agreements for services and deliverables provided under this Contract, and may further pursue completion of the Services/Deliverables under this Contract by replacement contract or otherwise as the State may in its sole judgment deem expedient.

2.158 Reservation of Rights

Any termination of this Contract or any Statement of Work issued under it by a party must be with full reservation of, and without prejudice to, any rights or remedies otherwise available to the party with respect to any claims arising before or as a result of the termination.

2.160 Termination by Contractor

2.161 Termination by Contractor

If the State breaches the Contract, and the Contractor in its sole discretion determines that the breach is curable, then the Contractor will provide the State with written notice of the breach and a time period (not less than 30 days) to cure the breach. The Notice of Breach and opportunity to cure is inapplicable for successive and repeated breaches.

The Contractor may terminate this Contract if the State (i) materially breaches its obligation to pay the Contractor undisputed amounts due and owing under this Contract, (ii) breaches its other obligations under this Contract to an extent that makes it impossible or commercially impractical for the Contractor to perform the Services, or (iii) does not cure the breach within the time period specified in a written notice of breach. But the Contractor must discharge its obligations under **Section 2.160** before it terminates the Contract.



2.170 Transition Responsibilities

2.171 Contractor Transition Responsibilities

If the State terminates this contract, for convenience or cause, or if the Contract is otherwise dissolved, voided, rescinded, nullified, expires or rendered unenforceable, the Contractor shall comply with direction provided by the State to assist in the orderly transition of equipment, services, software, leases, etc. to the State or a third party designated by the State. If this Contract expires or terminates, the Contractor agrees to make all reasonable efforts to effect an orderly transition of services within a reasonable period of time that in no event will exceed 30 days. These efforts must include, but are not limited to, those listed in **Section 2.150**.

2.172 Contractor Personnel Transition

The Contractor shall work with the State, or a specified third party, to develop a transition plan setting forth the specific tasks and schedule to be accomplished by the parties, to effect an orderly transition. The Contractor must allow as many personnel as practicable to remain on the job to help the State, or a specified third party, maintain the continuity and consistency of the services required by this Contract. In addition, during or following the transition period, in the event the State requires the Services of the Contractor's subcontractors or vendors, as necessary to meet its needs, Contractor agrees to reasonably, and with good-faith, work with the State to use the Services of Contractor's subcontractors or vendors. Contractor will notify all of Contractor's subcontractors of procedures to be followed during transition.

2.173 Contractor Information Transition

The Contractor shall provide reasonable detailed specifications for all Services/Deliverables needed by the State, or specified third party, to properly provide the Services/Deliverables required under this Contract. The Contractor will provide the State with asset management data generated from the inception of this Contract through the date on which this Contractor is terminated in a comma-delineated format unless otherwise requested by the State. The Contractor will deliver to the State any remaining owed reports and documentation still in Contractor's possession subject to appropriate payment by the State.

2.174 Contractor Software Transition

The Contractor shall reasonably assist the State in the acquisition of any Contractor software required to perform the Services/use the Deliverables under this Contract. This must include any documentation being used by the Contractor to perform the Services under this Contract. If the State transfers any software licenses to the Contractor, those licenses must, upon expiration of the Contract, transfer back to the State at their current revision level. Upon notification by the State, Contractor may be required to freeze all non-critical changes to Deliverables/Services.

2.175 Transition Payments

If the transition results from a termination for any reason, the termination provisions of this Contract must govern reimbursement. If the transition results from expiration, the Contractor will be reimbursed for all reasonable transition costs (i.e. costs incurred within the agreed period after contract expiration that result from transition operations) at the rates agreed upon by the State. The Contractor will prepare an accurate accounting from which the State and Contractor may reconcile all outstanding accounts.

2.176 State Transition Responsibilities

In the event that this Contract is terminated, dissolved, voided, rescinded, nullified, or otherwise rendered unenforceable, the State agrees to reconcile all accounts between the State and the Contractor, complete any pending post-project reviews and perform any others obligations upon which the State and the Contractor agree.

- (a) Reconciling all accounts between the State and the Contractor;
- (b) Completing any pending post-project reviews.



2.180 Stop Work

2.181 Stop Work Orders

The State may, at any time, by written Stop Work Order to Contractor, require that Contractor stop all, or any part, of the work called for by the Contract for a period of up to 90 calendar days after the Stop Work Order is delivered to Contractor, and for any further period to which the parties may agree. The Stop Work Order must be identified as a Stop Work Order and must indicate that it is issued under this **Section**. Upon receipt of the stop work order, Contractor must immediately comply with its terms and take all reasonable steps to minimize incurring costs allocable to the work covered by the Stop Work Order during the period of work stoppage. Within the period of the stop work order, the State must either: (a) cancel the stop work order; or (b) terminate the work covered by the Stop Work Order as provided in **Section 2.182**.

2.182 Cancellation or Expiration of Stop Work Order

The Contractor shall resume work if the State cancels a Stop Work Order or if it expires. The parties shall agree upon an equitable adjustment in the delivery schedule, the Contract price, or both, and the Contract shall be modified, in writing, accordingly, if: (a) the Stop Work Order results in an increase in the time required for, or in Contractor's costs properly allocable to, the performance of any part of the Contract; and (b) Contractor asserts its right to an equitable adjustment within 30 calendar days after the end of the period of work stoppage; provided that, if the State decides the facts justify the action, the State may receive and act upon a Contractor proposal submitted at any time before final payment under the Contract. Any adjustment will conform to the requirements of **Section 2.024**.

2.183 Allowance of Contractor Costs

If the Stop Work Order is not canceled and the work covered by the Stop Work Order is terminated for reasons other than material breach, the termination shall be deemed to be a termination for convenience under **Section 2.153**, and the State shall pay reasonable costs resulting from the Stop Work Order in arriving at the termination settlement. For the avoidance of doubt, the State shall not be liable to Contractor for loss of profits because of a Stop Work Order issued under this Section.

2.190 Dispute Resolution

2.191 In General

Any claim, counterclaim, or dispute between the State and Contractor arising out of or relating to the Contract or any Statement of Work must be resolved as follows. For all Contractor claims seeking an increase in the amounts payable to Contractor under the Contract, or the time for Contractor's performance, Contractor must submit a letter, together with all data supporting the claims, executed by Contractor's Contract Administrator or the Contract Administrator's designee certifying that (a) the claim is made in good faith, (b) the amount claimed accurately reflects the adjustments in the amounts payable to Contractor or the time for Contractor's performance for which Contractor believes the State is liable and covers all costs of every type to which Contractor is entitled from the occurrence of the claimed event, and (c) the claim and the supporting data are current and complete to Contractor's best knowledge and belief.

2.192 Informal Dispute Resolution

(a) All disputes between the parties shall be resolved under the Contract Management procedures in this Contract. If the parties are unable to resolve any dispute after compliance with the processes, the parties must meet with the Director of Purchasing Operations, DMB, or designee, to resolve the dispute without the need for formal legal proceedings, as follows:

(1) The representatives of Contractor and the State must meet as often as the parties reasonably deem necessary to gather and furnish to each other all information with respect to the matter at issue which the parties believe to be appropriate and germane in connection with its resolution. The representatives shall discuss the problem and negotiate in good faith in an effort to resolve the dispute without the necessity of any formal proceeding.



- (2) During the course of negotiations, all reasonable requests made by one party to another for non-privileged information reasonably related to the Contract shall be honored in order that each of the parties may be fully advised of the other's position.
- (3) The specific format for the discussions shall be left to the discretion of the designated State and Contractor representatives, but may include the preparation of agreed upon statements of fact or written statements of position.
- (4) Following the completion of this process within 60 calendar days, the Director of Purchasing Operations, DMB, or designee, shall issue a written opinion regarding the issue(s) in dispute within 30 calendar days. The opinion regarding the dispute must be considered the State's final action and the exhaustion of administrative remedies.
- (b) This Section shall not be construed to prevent either party from instituting, and a party is authorized to institute, formal proceedings earlier to avoid the expiration of any applicable limitations period, to preserve a superior position with respect to other creditors, or under Section 2.193.
- (c) The State shall not mediate disputes between the Contractor and any other entity, except state agencies, concerning responsibility for performance of work under the Contract.

2.193 Injunctive Relief

The only circumstance in which disputes between the State and Contractor shall not be subject to the provisions of **Section 2.192** is where a party makes a good faith determination that a breach of the terms of the Contract by the other party is that the damages to the party resulting from the breach shall be so immediate, so large or severe and so incapable of adequate redress after the fact that a temporary restraining order or other immediate injunctive relief is the only adequate remedy.

2.194 Continued Performance

Each party agrees to continue performing its obligations under the Contract while a dispute is being resolved except to the extent the issue in dispute precludes performance (dispute over payment must not be deemed to preclude performance) and without limiting either party's right to terminate the Contract as provided in **Section 2.150**, as the case may be.

2.200 Federal and State Contract Requirements

2.201 Nondiscrimination

In the performance of the Contract, Contractor agrees not to discriminate against any employee or applicant for employment, with respect to his or her hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, and marital status, physical or mental disability. Contractor further agrees that every subcontract entered into for the performance of this Contract or any purchase order resulting from this Contract will contain a provision requiring non-discrimination in employment, as specified here, binding upon each subcontractor. This covenant is required under the Elliot Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101, et seq., and the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101, et seq., and any breach of this provision may be regarded as a material breach of the Contract.

2.202 Unfair Labor Practices

Under 1980 PA 278, MCL 423.321, et seq., the State shall not award a Contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled under section 2 of the Act. This information is compiled by the United States National Labor Relations Board. A Contractor of the State, in relation to the Contract, shall not enter into a contract with a subcontractor, manufacturer, or supplier whose name appears in this register. Under section 4 of 1980 PA 278, MCL 423.324, the State may void any Contract if, after award of the Contract, the name of Contractor as an employer or the name of the subcontractor, manufacturer or supplier of Contractor appears in the register.

2.203 Workplace Safety and Discriminatory Harassment

In performing Services for the State, the Contractor shall comply with the Department of Civil Services Rule 2-20 regarding Workplace Safety and Rule 1-8.3 regarding Discriminatory Harassment. In addition, the Contractor shall comply with Civil Service regulations and any applicable agency rules provided to the Contractor. For Civil Service Rules, see <http://www.mi.gov/mdcs/0,1607,7-147-6877---,00.html>.



2.204 Prevailing Wage

Wages rates and fringe benefits to be paid each class of individuals employed by the Contractor, its subcontractors, their subcontractors, and all persons involved with the performance of this Contract in privity of contract with the Contractor shall not be less than the wage rates and fringe benefits established by the Michigan Department of Labor and Economic Development, Wage and Hour Bureau, schedule of occupational classification and wage rates and fringe benefits for the local where the work is to be performed. The term Contractor shall include all general Contractors, prime Contractors, project managers, trade Contractors, and all of their Contractors or subcontractors and persons in privity of contract with them.

The Contractor, its subcontractors, their subcontractors and all persons involved with the performance of this contract in privity of contract with the Contractor shall keep posted on the work site, in a conspicuous place, a copy of all wage rates and fringe benefits as prescribed in the Contract. Contractor shall also post, in a conspicuous place, the address and telephone number of the Michigan Department of Labor and Economic Development, the agency responsible for enforcement of the wage rates and fringe benefits. Contractor shall keep an accurate record showing the name and occupation of the actual wage and benefits paid to each individual employed in connection with this contract. This record shall be available to the State upon request for reasonable inspection.

If any trade is omitted from the list of wage rates and fringe benefits to be paid to each class of individuals by the Contractor, it is understood that the trades omitted shall also be paid not less than the wage rate and fringe benefits prevailing in the local where the work is to be performed.

2.210 Governing Law

2.211 Governing Law

The Contract shall in all respects be governed by, and construed according to, the substantive laws of the State of Michigan without regard to any Michigan choice of law rules that would apply the substantive law of any other jurisdiction to the extent not inconsistent with, or pre-empted by federal law.

2.212 Compliance with Laws

Contractor shall comply with all applicable state, federal and local laws and ordinances in providing the Services/Deliverables.

2.213 Jurisdiction

Any dispute arising from the Contract shall be resolved in the State of Michigan. With respect to any claim between the parties, Contractor consents to venue in Ingham County, Michigan, and irrevocably waives any objections it may have to the jurisdiction on the grounds of lack of personal jurisdiction of the court or the laying of venue of the court or on the basis of forum non conveniens or otherwise. Contractor agrees to appoint agents in the State of Michigan to receive service of process.

2.220 Limitation of Liability

2.221 Limitation of Liability

Neither the Contractor nor the State shall be liable to each other, regardless of the form of action, for consequential, incidental, indirect, or special damages. This limitation of liability does not apply to claims for infringement of United States patent, copyright, trademark or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.

The Contractor's liability for damages to the State is limited to two times the value of the Contract or \$500,000 which ever is higher. The foregoing limitation of liability does not apply to claims for infringement of United States patent, copyright, trademarks or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.



The State's liability for damages to the Contractor is limited to the value of the Contract.

2.230 Disclosure Responsibilities

2.231 Disclosure of Litigation

Contractor shall disclose any material criminal litigation, investigations or proceedings involving the Contractor (and each subcontractor) or any of its officers or directors or any litigation, investigations or proceedings under the Sarbanes-Oxley Act. In addition, each Contractor (and each subcontractor) shall notify the State of any material civil litigation, arbitration or proceeding which arises during the term of the Contract and extensions, to which Contractor (or, to the extent Contractor is aware, any subcontractor) is a party, and which involves: (i) disputes that might reasonably be expected to adversely affect the viability or financial stability of Contractor or any subcontractor; or (ii) a claim or written allegation of fraud against Contractor or, to the extent Contractor is aware, any subcontractor by a governmental or public entity arising out of their business dealings with governmental or public entities. The Contractor shall disclose in writing to the Contract Administrator any litigation, investigation, arbitration or other proceeding (collectively, "Proceeding") within 30 days of its occurrence. Details of settlements that are prevented from disclosure by the terms of the settlement may be annotated. Information provided to the State from Contractor's publicly filed documents referencing its material litigation shall be deemed to satisfy the requirements of this Section.

If any Proceeding disclosed to the State under this Section, or of which the State otherwise becomes aware, during the term of this Contract would cause a reasonable party to be concerned about:

- (a) the ability of Contractor (or a subcontractor) to continue to perform this Contract according to its terms and conditions, or
- (b) whether Contractor (or a subcontractor) in performing Services for the State is engaged in conduct which is similar in nature to conduct alleged in the Proceeding, which conduct would constitute a breach of this Contract or a violation of Michigan law, regulations or public policy, then the Contractor must provide the State all reasonable assurances requested by the State to demonstrate that:
 - (1) Contractor and its subcontractors will be able to continue to perform this Contract and any Statements of Work according to its terms and conditions, and
 - (2) Contractor and its subcontractors have not and will not engage in conduct in performing the Services which is similar in nature to the conduct alleged in the Proceeding.
- (c) Contractor shall make the following notifications in writing:
 - (1) Within 30 days of Contractor becoming aware that a change in its ownership or officers has occurred, or is certain to occur, or a change that could result in changes in the valuation of its capitalized assets in the accounting records, Contractor must notify MDTMB Purchasing Operations.
 - (2) Contractor shall also notify MDTMB Purchasing Operations within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership or officers.
 - (3) Contractor shall also notify MDTMB Purchase Operations within 30 days whenever changes to company affiliations occur.

2.232 Call Center Disclosure

Contractor and/or all subcontractors involved in the performance of this Contract providing call or contact center services to the State shall disclose the location of its call or contact center services to inbound callers. Failure to disclose this information is a material breach of this Contract.

2.233 Bankruptcy

The State may, without prejudice to any other right or remedy, terminate this Contract, in whole or in part, and, at its option, may take possession of the "Work in Process" and finish the Works in Process by whatever appropriate method the State may deem expedient if:

- (a) the Contractor files for protection under the bankruptcy laws;
- (b) an involuntary petition is filed against the Contractor and not removed within 30 days;
- (c) the Contractor becomes insolvent or if a receiver is appointed due to the Contractor's insolvency;
- (d) the Contractor makes a general assignment for the benefit of creditors; or
- (e) the Contractor or its affiliates are unable to provide reasonable assurances that the Contractor or its affiliates can deliver the services under this Contract.



Contractor will fix appropriate notices or labels on the Work in Process to indicate ownership by the State. To the extent reasonably possible, materials and Work in Process shall be stored separately from other stock and marked conspicuously with labels indicating ownership by the State.

2.240 Performance

2.241 Time of Performance

- (a) Contractor shall use commercially reasonable efforts to provide the resources necessary to complete all Services and Deliverables according to the time schedules contained in the Statements of Work and other Exhibits governing the work, and with professional quality.
- (b) Without limiting the generality of **Section 2.241**, Contractor shall notify the State in a timely manner upon becoming aware of any circumstances that may reasonably be expected to jeopardize the timely and successful completion of any Deliverables/Services on the scheduled due dates in the latest State-approved delivery schedule and must inform the State of the projected actual delivery date.
- (c) If the Contractor believes that a delay in performance by the State has caused or will cause the Contractor to be unable to perform its obligations according to specified Contract time periods, the Contractor must notify the State in a timely manner and must use commercially reasonable efforts to perform its obligations according to the Contract time periods notwithstanding the State's failure. Contractor will not be in default for a delay in performance to the extent the delay is caused by the State.

2.242 Service Level Agreement (SLA)

- (a) SLAs will be completed with the following operational considerations:
 - (1) SLAs will not be calculated for individual Incidents where any event of Excusable Failure has been determined; Incident means any interruption in Services.
 - (2) SLAs will not be calculated for individual Incidents where loss of service is planned and where the State has received prior notification or coordination.
 - (3) SLAs will not apply if the applicable Incident could have been prevented through planning proposed by Contractor and not implemented at the request of the State. To invoke this consideration, complete documentation relevant to the denied planning proposal must be presented to substantiate the proposal.
 - (4) Time period measurements will be based on the time Incidents are received by the Contractor and the time that the State receives notification of resolution based on 24x7x365 time period, except that the time period measurement will be suspended based on the following:
 - (i) Time period(s) will not apply where Contractor does not have access to a physical State Location and where access to the State Location is necessary for problem identification and resolution.
 - (ii) Time period(s) will not apply where Contractor needs to obtain timely and accurate information or appropriate feedback and is unable to obtain timely and accurate information or appropriate feedback from the State.
- (b) Chronic Failure for any Service(s) will be defined as three unscheduled outage(s) or interruption(s) on any individual Service for the same reason or cause or if the same reason or cause was reasonably discoverable in the first instance over a rolling 30 day period. Chronic Failure will result in the State's option to terminate the effected individual Service(s) and procure them from a different vendor for the chronic location(s) with Contractor to pay the difference in charges for up to three additional months. The termination of the Service will not affect any tiered pricing levels.
- (c) Root Cause Analysis will be performed on any Business Critical outage(s) or outage(s) on Services when requested by the Contract Administrator. Contractor will provide its analysis within two weeks of outage(s) and provide a recommendation for resolution.
- (d) All decimals must be rounded to two decimal places with five and greater rounding up and four and less rounding down unless otherwise specified.

2.243 Liquidated Damages

The parties acknowledge that late or improper completion of the Work will cause loss and damage to the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result. Therefore, Contractor and the State agree that if there is late or improper completion of the Work and



the State does not elect to exercise its rights under **Section 2.152**, the State is entitled to collect liquidated damages in the amount of **\$100,000.00** and an additional **\$1,000.00** per day for each day Contractor fails to remedy the late or improper completion of the Work.

Unauthorized Removal of any Key Personnel

It is acknowledged that an Unauthorized Removal will interfere with the timely and proper completion of the Contract, to the loss and damage of the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result of any Unauthorized Removal. Therefore, Contractor and the State agree that in the case of any Unauthorized Removal in respect of which the State does not elect to exercise its rights under **Section 2.152**, the State may assess liquidated damages against Contractor as specified below.

For the Unauthorized Removal of any Key Personnel designated in the applicable Statement of Work, the liquidated damages amount is \$25,000.00 per individual if the Contractor identifies a replacement approved by the State under **Section 2.060** and assigns the replacement to the Project to shadow the Key Personnel who is leaving for a period of at least 30 days before the Key Personnel's removal.

If Contractor fails to assign a replacement to shadow the removed Key Personnel for at least 30 days, in addition to the \$25,000.00 liquidated damages for an Unauthorized Removal, Contractor must pay the amount of \$833.33 per day for each day of the 30 day shadow period that the replacement Key Personnel does not shadow the removed Key Personnel, up to \$25,000.00 maximum per individual. The total liquidated damages that may be assessed per Unauthorized Removal and failure to provide 30 days of shadowing must not exceed \$50,000.00 per individual.

2.244 Excusable Failure

Neither party will be liable for any default, damage or delay in the performance of its obligations under the Contract to the extent the default, damage or delay is caused by government regulations or requirements (executive, legislative, judicial, military or otherwise), power failure, electrical surges or current fluctuations, lightning, earthquake, war, water or other forces of nature or acts of God, delays or failures of transportation, equipment shortages, suppliers' failures, or acts or omissions of common carriers, fire; riots, civil disorders; strikes or other labor disputes, embargoes; injunctions (provided the injunction was not issued as a result of any fault or negligence of the party seeking to have its default or delay excused); or any other cause beyond the reasonable control of a party; provided the non-performing party and its subcontractors are without fault in causing the default or delay, and the default or delay could not have been prevented by reasonable precautions and cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means, including disaster recovery plans.

If a party does not perform its contractual obligations for any of the reasons listed above, the non-performing party will be excused from any further performance of its affected obligation(s) for as long as the circumstances prevail. But the party must use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay. A party must promptly notify the other party in writing immediately after the excusable failure occurs, and also when it abates or ends.

If any of the above-enumerated circumstances substantially prevent, hinder, or delay the Contractor's performance of the Services/provision of Deliverables for more than 10 Business Days, and the State determines that performance is not likely to be resumed within a period of time that is satisfactory to the State in its reasonable discretion, then at the State's option: (a) the State may procure the affected Services/Deliverables from an alternate source, and the State is not be liable for payment for the unperformed Services/ Deliverables not provided under the Contract for so long as the delay in performance continues; (b) the State may terminate any portion of the Contract so affected and the charges payable will be equitably adjusted to reflect those Services/Deliverables terminated; or (c) the State may terminate the affected Statement of Work without liability to Contractor as of a date specified by the State in a written notice of termination to the Contractor, except to the extent that the State must pay for Services/Deliverables provided through the date of termination.



The Contractor will not have the right to any additional payments from the State as a result of any Excusable Failure occurrence or to payments for Services not rendered/Deliverables not provided as a result of the Excusable Failure condition. Defaults or delays in performance by Contractor which are caused by acts or omissions of its subcontractors will not relieve Contractor of its obligations under the Contract except to the extent that a subcontractor is itself subject to an Excusable Failure condition described above and Contractor cannot reasonably circumvent the effect of the subcontractor's default or delay in performance through the use of alternate sources, workaround plans or other means.

2.250 Approval of Deliverables

2.251 Delivery of Deliverables

A list of the Deliverables to be prepared and delivered by Contractor including, for each Deliverable, the scheduled delivery date and a designation of whether the Deliverable is a document ("Written Deliverable") or a Custom Software Deliverable is attached, if applicable. All Deliverables shall be completed and delivered for State review and written approval and, where applicable, installed in accordance with the State-approved delivery schedule and any other applicable terms and conditions of this Contract.

Prior to delivering any Deliverable to the State, Contractor will first perform all required quality assurance activities, and, in the case of Custom Software Deliverables, System Testing to verify that the Deliverable is complete and in conformance with its specifications. Before delivering a Deliverable to the State, Contractor shall certify to the State that (1) it has performed such quality assurance activities, (2) it has performed any applicable testing, (3) it has corrected all material deficiencies discovered during such quality assurance activities and testing, (4) the Deliverable is in a suitable state of readiness for the State's review and approval, and (5) the Deliverable/Service has all Critical Security patches/updates applied.

In discharging its obligations under this Section, Contractor shall be at all times (except where the parties agree otherwise in writing) in compliance with Level 3 of the Software Engineering Institute's Capability Maturity Model for Software ("CMM Level 3") or its equivalent.

2.252 Contractor System Testing

Contractor will be responsible for System Testing each Custom Software Deliverable in Contractor's development environment prior to turning over the Custom Software Deliverable to the State for User Acceptance Testing and approval. Contractor's System Testing shall include the following, at a minimum, plus any other testing required by CMM Level 3 or Contractor's system development methodology:

Contractor will be responsible for performing Unit Testing and incremental Integration Testing of the components of each Custom Software Deliverable.

Contractor's System Testing will also include Integration Testing of each Custom Software Deliverable to ensure proper inter-operation with all prior software Deliverables, interfaces and other components that are intended to inter-operate with such Custom Software Deliverable, and will include Regression Testing, volume and stress testing to ensure that the Custom Software Deliverables are able to meet the State's projected growth in the number and size of transactions to be processed by the Application and number of users, as such projections are set forth in the applicable Statement of Work.

Contractor's System Testing will also include Business Function Testing and Technical Testing of each Application in a simulated production environment. Business Function Testing will include testing of full work streams that flow through the Application as the Application will be incorporated within the State's computing environment. The State shall participate in and provide support for the Business Function Testing to the extent reasonably requested by Contractor. Within ten (10) days before the commencement of Business Function Testing pursuant to this Section, Contractor shall provide the State for State review and written approval Contractor's test plan for Business Function Testing.



Within five (5) Business Days following the completion of System Testing pursuant to this **Section**, Contractor shall provide to the State a testing matrix establishing that testing for each condition identified in the System Testing plans has been conducted and successfully concluded. To the extent that testing occurs on State premises, the State shall be entitled to observe or otherwise participate in testing under this Section as the State may elect.

2.253 Approval of Deliverables, In General

All Deliverables (Written Deliverables and Custom Software Deliverables) require formal written approval by the State, in accordance with the following procedures. Formal approval by the State requires that the Deliverable be confirmed in writing by the State to meet its specifications, which, in the case of Custom Software Deliverables, will include the successful completion of State User Acceptance Testing, to be led by the State with the support and assistance of Contractor. The parties acknowledge that the approval process set forth herein will be facilitated by ongoing consultation between the parties, visibility of interim and intermediate Deliverables and collaboration on key decisions.

The State's obligation to comply with any State Review Period is conditioned on the timely delivery of Deliverables being reviewed. If Contractor fails to provide a Deliverable to the State in a timely manner, the State will nevertheless use commercially reasonable efforts to complete its review or testing within the applicable State Review Period.

Before commencement of its review or testing of a Deliverable, the State may inspect the Deliverable to confirm that all components of the Deliverable (e.g., software, associated documentation, and other materials) have been delivered. If the State determines that the Deliverable is incomplete, the State may refuse delivery of the Deliverable without performing any further inspection or testing of the Deliverable. Otherwise, the review period will be deemed to have started on the day the State receives the Deliverable and the applicable certification by Contractor in accordance with this Section.

The State will approve in writing a Deliverable upon confirming that it conforms to and, in the case of a Custom Software Deliverable, performs in accordance with, its specifications without material deficiency. The State may, but shall not be required to, conditionally approve in writing a Deliverable that contains material deficiencies if the State elects to permit Contractor to rectify them post-approval. In any case, Contractor will be responsible for working diligently to correct within a reasonable time at Contractor's expense all deficiencies in the Deliverable that remain outstanding at the time of State approval.

If, after three (3) opportunities (the original and two repeat efforts), Contractor is unable to correct all deficiencies preventing State approval of a Deliverable, the State may: (i) demand that Contractor cure the failure and give Contractor additional time to cure the failure at the sole expense of Contractor; or (ii) keep this Contract in force and do, either itself or through other parties, whatever Contractor has failed to do, in which event Contractor shall bear any excess expenditure incurred by the State in so doing beyond the contract price for such Deliverable and will pay the State an additional sum equal to ten percent (10%) of such excess expenditure to cover the State's general expenses without the need to furnish proof in substantiation of such general expenses; or (iii) terminate this Contract for default, either in whole or in part by notice to Contractor (and without the need to afford Contractor any further opportunity to cure). Notwithstanding the foregoing, the State shall not use, as a basis for exercising its termination rights under this Section, deficiencies discovered in a repeat State Review Period that could reasonably have been discovered during a prior State Review Period.

The State, at any time and in its own discretion, may halt the UAT or approval process if such process reveals deficiencies in or problems with a Deliverable in a sufficient quantity or of a sufficient severity as to make the continuation of such process unproductive or unworkable. In such case, the State may return the applicable Deliverable to Contractor for correction and re-delivery prior to resuming the review or UAT process and, in that event, Contractor will correct the deficiencies in such Deliverable in accordance with the Contract, as the case may be.



Approval in writing of a Deliverable by the State shall be provisional; that is, such approval shall not preclude the State from later identifying deficiencies in, and declining to accept, a subsequent Deliverable based on or which incorporates or inter-operates with an approved Deliverable, to the extent that the results of subsequent review or testing indicate the existence of deficiencies in the subsequent Deliverable, or if the Application of which the subsequent Deliverable is a component otherwise fails to be accepted pursuant to **Section 2.080**.

2.254 Process for Approval of Written Deliverables

The State Review Period for Written Deliverables will be the number of days set forth in the applicable Statement of Work following delivery of the final version of the Written Deliverable (failing which the State Review Period, by default, shall be ten (10) Business Days for Written Deliverables of twenty five(25) pages or less and twenty (20) Business Days for Written Deliverables of more than twenty five (25) pages). The duration of the State Review Periods will be doubled if the State has not had an opportunity to review an interim draft of the Written Deliverable prior to its submission to the State. The State agrees to notify Contractor in writing by the end of the State Review Period either stating that the Written Deliverable is approved in the form delivered by Contractor or describing any deficiencies that must be corrected prior to approval of the Written Deliverable (or at the State's election, subsequent to approval of the Written Deliverable). If the State delivers to Contractor a notice of deficiencies, Contractor will correct the described deficiencies and within five (5) Business Days resubmit the Deliverable in a form that shows all revisions made to the original version delivered to the State. Contractor's correction efforts will be made at no additional charge. Upon receipt of a corrected Written Deliverable from Contractor, the State will have a reasonable additional period of time, not to exceed the length of the original State Review Period, to review the corrected Written Deliverable to confirm that the identified deficiencies have been corrected.

2.255 Process for Approval of Custom Software Deliverables

The State will conduct UAT of each Custom Software Deliverable in accordance with the following procedures to determine whether it meets the criteria for State approval – i.e., whether it conforms to and performs in accordance with its specifications without material deficiencies.

Within thirty (30) days (or such other number of days as the parties may agree to in writing) prior to Contractor's delivery of any Custom Software Deliverable to the State for approval, Contractor shall provide to the State a set of proposed test plans, including test cases, scripts, data and expected outcomes, for the State's use (which the State may supplement in its own discretion) in conducting UAT of the Custom Software Deliverable. Contractor, upon request by the State, shall provide the State with reasonable assistance and support during the UAT process.

For the Custom Software Deliverables listed in an attachment, the State Review Period for conducting UAT will be as indicated in the attachment. For any other Custom Software Deliverables not listed in an attachment, the State Review Period shall be the number of days agreed in writing by the parties (failing which it shall be forty-five (45) days by default). The State Review Period for each Custom Software Deliverable will begin when Contractor has delivered the Custom Software Deliverable to the State accompanied by the certification required by this **Section** and the State's inspection of the Deliverable has confirmed that all components of it have been delivered.

The State's UAT will consist of executing test scripts from the proposed testing submitted by Contractor, but may also include any additional testing deemed appropriate by the State. If the State determines during the UAT that the Custom Software Deliverable contains any deficiencies, the State will notify Contractor of the deficiency by making an entry in an incident reporting system available to both Contractor and the State. Contractor will modify promptly the Custom Software Deliverable to correct the reported deficiencies, conduct appropriate System Testing (including, where applicable, Regression Testing) to confirm the proper correction of the deficiencies and re-deliver the corrected version to the State for re-testing in UAT. Contractor will coordinate the re-delivery of corrected versions of Custom Software Deliverables with the State so as not to disrupt the State's UAT process. The State will promptly re-test the corrected version of the Software Deliverable after receiving it from Contractor.



Within three (3) business days after the end of the State Review Period, the State will give Contractor a written notice indicating the State's approval or rejection of the Custom Software Deliverable according to the criteria and process set out in this **Section**.

2.256 Final Acceptance

"Final Acceptance" shall be considered to occur when the Custom Software Deliverable to be delivered has been approved by the State and has been operating in production without any material deficiency for fourteen (14) consecutive days. If the State elects to defer putting a Custom Software Deliverable into live production for its own reasons, not based on concerns about outstanding material deficiencies in the Deliverable, the State shall nevertheless grant Final Acceptance of the Project.

2.260 Ownership

2.261 Ownership of Work Product by State

The State owns all Deliverables, as they are work made for hire by the Contractor for the State. The State owns all United States and international copyrights, trademarks, patents or other proprietary rights in the Deliverables.

2.262 Vesting of Rights

With the sole exception of any preexisting licensed works identified in the SOW, the Contractor assigns, and upon creation of each Deliverable automatically assigns, to the State, ownership of all United States and international copyrights, trademarks, patents, or other proprietary rights in each and every Deliverable, whether or not registered by the Contractor, insofar as any the Deliverable, by operation of law, may not be considered work made for hire by the Contractor for the State. From time to time upon the State's request, the Contractor must confirm the assignment by execution and delivery of the assignments, confirmations of assignment, or other written instruments as the State may request. The State may obtain and hold in its own name all copyright, trademark, and patent registrations and other evidence of rights that may be available for Deliverables.

2.263 Rights in Data

The State is the owner of all data made available by the State to the Contractor or its agents, subcontractors or representatives under the Contract. The Contractor will not use the State's data for any purpose other than providing the Services, nor will any part of the State's data be disclosed, sold, assigned, leased or otherwise disposed of to the general public or to specific third parties or commercially exploited by or on behalf of the Contractor. No employees of the Contractor, other than those on a strictly need-to-know basis, have access to the State's data. Contractor will not possess or assert any lien or other right against the State's data. Without limiting the generality of this Section, the Contractor must only use personally identifiable information as strictly necessary to provide the Services and must disclose the information only to its employees who have a strict need-to-know the information. The Contractor must comply at all times with all laws and regulations applicable to the personally identifiable information.

The State is the owner of all State-specific data under the Contract. The State may use the data provided by the Contractor for any purpose. The State will not possess or assert any lien or other right against the Contractor's data. Without limiting the generality of this Section, the State may use personally identifiable information only as strictly necessary to utilize the Services and must disclose the information only to its employees who have a strict need to know the information, except as provided by law. The State must comply at all times with all laws and regulations applicable to the personally identifiable information. Other material developed and provided to the State remains the State's sole and exclusive property.

2.264 Ownership of Materials

The State and the Contractor will continue to own their respective proprietary technologies developed before entering into the Contract. Any hardware bought through the Contractor by the State, and paid for by the State, will be owned by the State. Any software licensed through the Contractor and sold to the State, will be licensed directly to the State.



2.270 State Standards

2.271 Existing Technology Standards

The Contractor will adhere to all existing standards as described within the comprehensive listing of the State's existing technology standards at <http://www.michigan.gov/dit>.

2.272 Acceptable Use Policy

To the extent that Contractor has access to the State computer system, Contractor must comply with the State's Acceptable Use Policy, see <http://www.michigan.gov/dit>. All Contractor employees must be required, in writing, to agree to the State's Acceptable Use Policy before accessing the State system. The State reserves the right to terminate Contractor's access to the State system if a violation occurs.

2.273 Systems Changes

Contractor is not responsible for and not authorized to make changes to any State systems without written authorization from the Project Manager. Any changes Contractor makes to State systems with the State's approval must be done according to applicable State procedures, including security, access and configuration management procedures.

2.280 Extended Purchasing

2.281 MiDEAL (Michigan Delivery Extended Agreements Locally)

Public Act 431 of 1984 permits MDTMB to provide purchasing services to any city, village, county, township, school district, intermediate school district, non-profit hospital, institution of higher education, community, or junior college. A current listing of approved program members is available at: www.michigan.gov/buymichiganfirst. Unless otherwise stated, the Contractor must ensure that the non-state agency is an authorized purchaser before extending the Contract pricing.

The Contractor will supply Contract Services and equipment to these local governmental agencies at the established State of Michigan contract prices and terms to the extent applicable and where available. The Contractor must send its invoices to, and pay the local unit of government, on a direct and individual basis.

To the extent that authorized local units of government purchase quantities of Services and/or equipment under this Contract, the quantities of Services and/or equipment purchased will be included in determining the appropriate rate wherever tiered pricing based on quantity is provided.

2.282 State Employee Purchases

The State allows State employees to purchase from this Contract. Unless otherwise stated, it is the responsibility of the Contractor to ensure that the State employee is an authorized purchaser before extending the Contract pricing.

The Contractor will supply Contract Services and Deliverables at the established State of Michigan contract prices and terms to the extent applicable and where available. The Contractor shall send its invoices to and pay the State employee on a direct and individual basis.

To the extent that authorized State employees purchase quantities of Services or Deliverables under this Contract, the quantities of Services and/or Deliverables purchased will be included in determining the appropriate rate wherever tiered pricing based on quantity is provided.

2.290 Environmental Provision

2.291 Environmental Provision

Energy Efficiency Purchasing Policy: The State seeks wherever possible to purchase energy efficient products. This includes giving preference to U.S. Environmental Protection Agency (EPA) certified 'Energy Star' products for any category of products for which EPA has established Energy Star certification. For other purchases, the State may include energy efficiency as one of the priority factors to consider when choosing among comparable products.



Environmental Purchasing Policy: The State of Michigan is committed to encouraging the use of products and services that impact the environment less than competing products. The State is accomplishing this by including environmental considerations in purchasing decisions, while remaining fiscally responsible, to promote practices that improve worker health, conserve natural resources, and prevent pollution. Environmental components that are to be considered include: recycled content and recyclables; energy efficiency; and the presence of undesirable materials in the products, especially those toxic chemicals which are persistent and bioaccumulative. The Contractor should be able to supply products containing recycled and environmentally preferable materials that meet performance requirements and is encouraged to offer such products throughout the duration of this Contract. Information on any relevant third party certification (such as Green Seal, Energy Star, etc.) should also be provided.

Hazardous Materials: For the purposes of this Section, "Hazardous Materials" is a generic term used to describe asbestos, ACBMs, PCBs, petroleum products, construction materials including paint thinners, solvents, gasoline, oil, and any other material the manufacture, use, treatment, storage, transportation or disposal of which is regulated by the federal, state or local laws governing the protection of the public health, natural resources or the environment. This includes, but is not limited to, materials the as batteries and circuit packs, and other materials that are regulated as (1) "Hazardous Materials" under the Hazardous Materials Transportation Act, (2) "chemical hazards" under the Occupational Safety and Health Administration standards, (3) "chemical substances or mixtures" under the Toxic Substances Control Act, (4) "pesticides" under the Federal Insecticide Fungicide and Rodenticide Act, and (5) "hazardous wastes" as defined or listed under the Resource Conservation and Recovery Act.

- (a) The Contractor shall use, handle, store, dispose of, process, transport and transfer any material considered a Hazardous Material according to all federal, State and local laws. The State shall provide a safe and suitable environment for performance of Contractor's Work. Before the commencement of Work, the State shall advise the Contractor of the presence at the work site of any Hazardous Material to the extent that the State is aware of the Hazardous Material. If the Contractor encounters material reasonably believed to be a Hazardous Material and which may present a substantial danger, the Contractor shall immediately stop all affected Work, notify the State in writing about the conditions encountered, and take appropriate health and safety precautions.
- (b) Upon receipt of a written notice, the State will investigate the conditions. If (a) the material is a Hazardous Material that may present a substantial danger, and (b) the Hazardous Material was not brought to the site by the Contractor, or does not result in whole or in part from any violation by the Contractor of any laws covering the use, handling, storage, disposal of, processing, transport and transfer of Hazardous Materials, the State shall order a suspension of Work in writing. The State shall proceed to have the Hazardous Material removed or rendered harmless. In the alternative, the State shall terminate the affected Work for the State's convenience.
- (c) Once the Hazardous Material has been removed or rendered harmless by the State, the Contractor shall resume Work as directed in writing by the State. Any determination by the Michigan Department of Community Health or the Michigan Department of Environmental Quality that the Hazardous Material has either been removed or rendered harmless is binding upon the State and Contractor for the purposes of resuming the Work. If any incident with Hazardous Material results in delay not reasonable anticipatable under the circumstances and which is attributable to the State, the applicable SLAs for the affected Work will not be counted in a time as mutually agreed by the parties.
- (d) If the Hazardous Material was brought to the site by the Contractor, or results in whole or in part from any violation by the Contractor of any laws covering the use, handling, storage, disposal of, processing, transport and transfer of Hazardous Material, or from any other act or omission within the control of the Contractor, the Contractor shall bear its proportionate share of the delay and costs involved in cleaning up the site and removing and rendering harmless the Hazardous Material according to Applicable Laws to the condition approved by applicable regulatory agency(ies).

Labeling: Michigan has a Consumer Products Rule pertaining to labeling of certain products containing volatile organic compounds. For specific details visit http://www.michigan.gov/deq/0,1607,7-135-3310_4108-173523--,00.html



Refrigeration and Air Conditioning: The Contractor shall comply with the applicable requirements of Sections 608 and 609 of the Clean Air Act (42 U.S.C. 7671g and 7671h) as each or both apply to this contract.

Environmental Performance: Waste Reduction Program - Contractor shall establish a program to promote cost-effective waste reduction in all operations and facilities covered by this contract. The Contractor's programs shall comply with applicable Federal, State, and local requirements, specifically including Section 6002 of the Resource Conservation and Recovery Act (42 U.S.C. 6962, et seq.).

2.300 Deliverables

2.301 Software

A list of the items of software the State is required to purchase for execution the Contract is attached. The list includes all software required to complete the Contract and make the Deliverables operable; if any additional software is required in order for the Deliverables to meet the requirements of this Contract, such software shall be provided to the State by Contractor at no additional charge (except where agreed upon and specified in a Statement of Work or Contract Change Notice). The attachment also identifies certain items of software to be provided by the State.

2.302 Hardware

A list of the items of hardware the State is required to purchase for executing the Contract is attached. The list includes all hardware required to complete the Contract and make the Deliverables operable; if any additional hardware is required in order for the Deliverables to meet the requirements of this Contract, such hardware shall be provided to the State by Contractor at no additional charge (except where agreed upon and specified in a Contract Change Notice). The attachment also identifies certain items of hardware to be provided by the State.

2.310 Software Warranties

2.311 Performance Warranty

The Contractor represents and warrants that Deliverables, after Final Acceptance, will perform and operate in compliance with the requirements and other standards of performance contained in this Contract (including all descriptions, specifications and drawings made a part of the Contract) for a period of (90) ninety days. In the event of a breach of this warranty, Contractor will promptly correct the affected Deliverable(s) at no charge to the State.

2.312 No Surreptitious Code Warranty

The Contractor represents and warrants that no copy of licensed Software provided to the State contains or will contain any Self-Help Code or any Unauthorized Code as defined below. This warranty is referred to in this Contract as the "No Surreptitious Code Warranty."

As used in this Contract, "Self-Help Code" means any back door, time bomb, drop dead device, or other software routine designed to disable a computer program automatically with the passage of time or under the positive control of a person other than the licensee of the software. Self-Help Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other person acting by authority of the owner) to obtain access to a licensee's computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.

As used in this Contract, "Unauthorized Code" means any virus, Trojan horse, spyware, worm or other Software routines or components designed to permit unauthorized access to disable, erase, or otherwise harm software, equipment, or data; or to perform any other such actions. The term Unauthorized Code does not include Self-Help Code. Unauthorized Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other person acting by authority of the owner) to obtain access to a licensee's computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.



In addition, Contractor will use up-to-date commercial virus detection software to detect and remove any viruses from any software prior to delivering it to the State.

2.313 Calendar Warranty

The Contractor represents and warrants that all software for which the Contractor either sells or licenses to the State of Michigan and used by the State prior to, during or after the calendar year 2000, includes or shall include, at no added cost to the State, design and performance so the State shall not experience software abnormality and/or the generation of incorrect results from the software, due to date oriented processing, in the operation of the business of the State of Michigan.

The software design, to insure calendar year rollover compatibility, shall include, but is not limited to: data structures (databases, data files, etc.) that provide 4-digit date century; stored data that contain date century recognition, including, but not limited to, data stored in databases and hardware device internal system dates; calculations and program logic (e.g., sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values) that accommodates same century and multi-century formulas and date values; interfaces that supply data to and receive data from other systems or organizations that prevent non-compliant dates and data from entering any State system; user interfaces (i.e., screens, reports, etc.) that accurately show 4 digit years; and assurance that the year 2000 shall be correctly treated as a leap year within all calculation and calendar logic.

2.314 Third-party Software Warranty

The Contractor represents and warrants that it will disclose the use or incorporation of any third-party software into the Deliverables. At the time of Delivery, the Contractor shall provide in writing the name and use of any Third-party Software, including information regarding the Contractor's authorization to include and utilize such software. The notice shall include a copy of any ownership agreement or license that authorizes the Contractor to use the Third-party Software.

2.315 Physical Media Warranty

Contractor represents and warrants that each licensed copy of the Software provided by the Contractor is free from physical defects in the media that tangibly embodies the copy. This warranty does not apply to defects discovered more than (30) thirty days after that date of Final Acceptance of the Software by the State. This warranty does not apply to defects arising from acts of Excusable Failure. If the Contractor breaches this warranty, then the State shall be entitled to replacement of the non-compliant copy by Contractor, at Contractor's expense (including shipping and handling).

2.320 Software Licensing - Reserved




2.330 Source Code Escrow - Reserved






Appendix A – Preliminary Project Plan

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	W	T
1	Project Planning Phase	31 days	Mon 12/13/10	Mon 1/24/11		PM CA BA		
2	Orientation Meeting	0.5 days	Mon 12/13/10	Mon 12/13/10		PM CA BA SoM		
3	Project Charter	5 days	Mon 12/13/10	Fri 12/17/10		PM CA BA SoM		
4	Detailed Project Plan	15 days	Mon 12/13/10	Fri 12/31/10		PM CA BA SoM		
5	Implement Electronic Project Library	15 days	Mon 12/13/10	Fri 12/31/10		PM CA BA SoM		
6	Create Reporting Formats	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
7	Create Quality Management Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
8	Create Issues Management Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
9	Create Risk Management Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
10	Create Change Management Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
11	Create Initial Turnover Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
12	Deliverable Expectation Planing	20 days	Mon 12/13/10	Fri 1/7/11				
13	Create Documents and Standards Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
14	Create Initial Training Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
15	Create Initial Knowledge Transfer Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
16	Create Initial Test Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
17	Create Initial Capacity Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
18	Create Initial Configuration Plan	20 days	Mon 12/13/10	Fri 1/7/11		PM CA BA SoM		
19	Training of State and Key Technical Resources	5 days	Mon 1/10/11	Fri 1/14/11	12			
20	Data Warehouse Methodology Training Planing	5 days	Mon 1/10/11	Fri 1/14/11		CA BA		
21	ETL/Architecture Tool Training Planing	5 days	Mon 1/10/11	Fri 1/14/11		CA BA		
22	Other Training Planing	5 days	Mon 1/10/11	Fri 1/14/11		CA BA		
23	Procurement of 50 SAS Training Credits	5 days	Mon 1/10/11	Fri 1/14/11		PM		
24	Stage Exit Approval	5 days	Mon 1/17/11	Fri 1/21/11	19	PM		
25	Procure Metadata Repository Solution	1 day	Mon 1/24/11	Mon 1/24/11	24	SoM		
26	Knowledge Transfer Execution Begins	314 days	Mon 1/24/11	Thu 4/5/12	24	All		
27	Requirements	38 days	Mon 1/24/11	Wed 3/16/11	24			
28	Implement SharePoint Environment	28 days	Mon 1/24/11	Wed 3/2/11		IA		
29	Face to Face Review Sessions	25 days	Mon 1/24/11	Fri 2/25/11				
30	Data Source Review	5 days	Mon 1/24/11	Fri 1/28/11		PM,CA 2 BA,IA		
31	Measures and Dereived Values	5 days	Mon 1/31/11	Fri 2/4/11	30	PM,CA 2 BA,IA		
32	Group Reports By Data Source	3 days	Mon 2/7/11	Wed 2/9/11	31	PM,CA 2 BA,IA		
33	Review reports group 1 of 4	5 days	Thu 2/10/11	Wed 2/16/11	32	.5 PM .5CA 1BA		
34	Review reports group 2 of 4	5 days	Thu 2/17/11	Wed 2/23/11	33	.5 PM .5CA 1BA		
35	Review reports group 3 of 4	5 days	Thu 2/10/11	Wed 2/16/11	32	.5 PM .5CA 1BA		
36	Review reports group 4 of 4	5 days	Thu 2/17/11	Wed 2/23/11	35	.5 PM .5CA 1BA		
37	Review Reports 20 Undefined	2 days	Thu 2/24/11	Fri 2/25/11	36	PM,CA 2 BA,IA		
38	Confirm Existing Requirements Appendix A - Appendix C	3 days	Mon 2/28/11	Wed 3/2/11	37	PM,CA 2 BA,IA		
39	Update Existing Requirements Appendix A As Needed	5 days	Thu 3/3/11	Wed 3/9/11	38	PM,CA 2 BA,IA		

Project: LDS Project Schedule Final
Date: Tue 8/3/10

Task 
Split 
Progress 




Milestone 
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External Tasks 
External Milestone 
Deadline 





ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	W	T
40	Update Existing Requirements Appendix B As Needed	5 days	Thu 3/3/11	Wed 3/9/11	38	PM,CA 2 BA,IA		
41	Update Existing Requirements Appendix C As Needed	5 days	Thu 3/3/11	Wed 3/9/11	38	PM,CA 2 BA,IA		
42	Update Existing Requirements Appendix D As Needed	5 days	Thu 3/3/11	Wed 3/9/11	38	PM,CA 2 BA,IA		
43	Update Existing Requirements Appendix E As Needed	5 days	Thu 3/3/11	Wed 3/9/11	38	PM,CA 2 BA,IA		
44	Update Existing Requirements Appendix F As Needed	5 days	Thu 3/3/11	Wed 3/9/11	38	PM,CA 2 BA,IA		
45	Update Capacity Plan	1 day	Mon 1/24/11	Mon 1/24/11		IA		
46	Stage Exit Approval	5 days	Thu 3/10/11	Wed 3/16/11	44	PM		
47	Technical Design Document	15 days	Thu 3/17/11	Wed 4/6/11	46			
48	Facilitate Joint Application Design	15 days	Thu 3/17/11	Wed 4/6/11		PM CA 2BA,IA,MS,SAS		
49	Provide Restrictions Based upon Framework	2 days	Thu 3/17/11	Fri 3/18/11		PM,CA		
50	Modeling	56 days	Thu 4/7/11	Thu 6/23/11	48			
51	Perform Dimensional Data Modeling	30 days	Thu 4/7/11	Wed 5/18/11		CA,MS DBA		
52	Create Logical Data Model	20 days	Thu 4/21/11	Wed 5/18/11		CA,MS,DBA		
53	Create Physical Data Model	20 days	Thu 4/21/11	Wed 5/18/11		CA,MS,DBA		
54	Create ETL Specification Plan	20 days	Thu 4/21/11	Wed 5/18/11		CA,SAS,BA		
55	Create OLAP/Analysis Services Database Design	20 days	Thu 5/5/11	Wed 6/1/11		CA,MS,DBA		
56	Create Designs Appendix B Queries and Reports	20 days	Thu 5/5/11	Wed 6/1/11		CA,MS,DBA		
57	Create Designs Up to 20 Additional Paramaritized Reports	10 days	Thu 6/2/11	Wed 6/15/11	56	CA,MS,DBA		
58	Update Capacity Plan	0.5 days	Thu 6/16/11	Thu 6/16/11	57	CA,SAS		
59	Finalize Configuration Plan	1 day	Thu 6/16/11	Thu 6/16/11	57	IA		
60	Stage Exit Approval	5 days	Fri 6/17/11	Thu 6/23/11	59	IA		
61	Development	96 days	Thu 5/19/11	Thu 9/29/11				
62	Update Test Plan	1 day	Fri 6/24/11	Fri 6/24/11	60	PM,BA		
63	Update Test Schedule	1 day	Fri 6/24/11	Fri 6/24/11	60	PM,BA		
64	Construction of Database Tables and Indexes	10 days	Thu 5/19/11	Wed 6/1/11	52	CA,MS,DBA		
65	Construction of ETL Processes	25 days	Thu 6/2/11	Wed 7/6/11	64	CA,SAS		
66	Create Queries and Reports	26.67 days	Thu 7/7/11	Fri 8/12/11	65	CA,MS,Developer		
67	Create Metadata Directory	3 days	Fri 6/24/11	Tue 6/28/11	60	CA,SAS,Developer		
68	Populate Solution with Metadata	10 days	Fri 7/22/11	Thu 8/4/11		CA,SAS		
69	Adjust and Maintain Metadata Repository	30 days	Fri 8/5/11	Thu 9/15/11	68	CA,SAS		
70	Document the Process to Update and Maintain Repository	3 days	Fri 8/5/11	Tue 8/9/11		SAS		
71	Construction of Test Cases	40 days	Fri 6/24/11	Thu 8/18/11	60	BA		
72	Construction of Reports	40 days	Fri 8/5/11	Thu 9/29/11		CA,MS Developer,MS		
73	Final Turnover Plan 30 Days Prior To Implementation	3 days	Mon 8/15/11	Wed 8/17/11		PM		
74	Final Turnover Report 20 days Prior To Implementation	3 days	Thu 9/1/11	Mon 9/5/11		PM		
75	Construction of Data Extracts	20 days	Fri 8/5/11	Thu 9/1/11		CA,SAS,Developer		
76	Technical Specification Documentation	5 days	Fri 9/2/11	Thu 9/8/11	75	CA,BA		
77	Update Capacity Plan	1 day	Fri 9/2/11	Fri 9/2/11	75	IA		
78	Stage Exit Approval	5 days	Fri 9/9/11	Thu 9/15/11	76	PM		

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Task 
Split 
Progress 

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External Tasks 
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ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	W T	
79	Testing	59 days	Mon 7/11/11	Thu 9/29/11				
80	Final Update Test Plan	1 day	Fri 9/16/11	Fri 9/16/11	78	PM,BA		
81	Finalize Test Schedule	1 day	Fri 9/16/11	Fri 9/16/11	78	PM,BA		
82	Test System Requirements	40 days	Fri 7/22/11	Thu 9/15/11		PM,BA,SoM		
83	Test System Performance	24 days	Mon 7/11/11	Thu 8/11/11		PM,BA,SoM,Developer,DBA		
84	Test Quality Assurance – System Integration	40 days	Fri 7/22/11	Thu 9/15/11		PM,BA,SoM		
85	User Acceptance Test	40 days	Fri 8/5/11	Thu 9/29/11		PM,BA,SoM		
86	Production Implementation	1 day	Fri 9/30/11	Fri 9/30/11				
87	Continuous Production Promotions Complete	1 day	Fri 9/30/11	Fri 9/30/11	85	SoM		
88	Update Capacity Plan	1 day	Fri 9/30/11	Fri 9/30/11	85	IA		
89	Evaluate and Update Turnover Plan	1 day	Fri 9/30/11	Fri 9/30/11	85	PM,BA,CA		
90	Finalize Installation Plan	0.67 days	Fri 9/30/11	Fri 9/30/11	85	PM,CA,IA		
91	Turnover Plan Sign Off	1 day	Fri 9/30/11	Fri 9/30/11	85	PM		
92	Stage Exit Approval	1 day	Fri 9/30/11	Fri 9/30/11	85	PM		
93	Project Closure - Turnover	61 days	Mon 10/3/11	Mon 12/26/11				
94	Update Final Turnover Report	5 days	Mon 10/3/11	Fri 10/7/11	92	PM,BA		
95	Final Update System Documentation	5 days	Mon 10/3/11	Fri 10/7/11	92	PM,CA,SAS,DBA,MS		
96	Knowledge Transfer Plan Execution Ends	1 day	Mon 10/3/11	Mon 10/3/11		All		
97	Optional Requirements Definition	20 days	Tue 10/4/11	Mon 10/31/11	96	PM,CA,BA		
98	Performance and Reliability Evaluation Testing	60 days	Mon 10/3/11	Fri 12/23/11	92	PM,CA		
99	Stage Exit Approval	1 day	Mon 12/26/11	Mon 12/26/11	98	PM		

Project: LDS Project Schedule Final
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Task



Milestone



External Tasks



Split



Summary



External Milestone



Progress



Project Summary



Deadline





Appendix B – Contractor Preliminary RASIC

RASIC Chart

Resource Responsibility R - Primary Responsibility A - Approval Authority S - Supporting Responsibility I - Information Only C - Consult	SAS Application Architect	Microsoft Business Intelligence Solution Architect	Key Project Manager	Key System Architect/DBA	Dewpoint Team	SoM Executive Subject Matter Experts	SoM Project Manager	SoM
Project Planning	S	R	S	S	S	A	A	I
Implement Electronic Project Library	C	C	S	S	R	A	A	I
Quality Management Plan	S	S	R	S	S	A	A	I
Documents and Standards Plan	S	S	R	S	S	A	A	I
Facilitate Face to Face Requirement Reviews	S	S	R	S	S	A	A	I
Confirm Existing Requirements Appendix A	S	S	S	R	S	A	A	I
Confirm Existing Requirements Appendix B	S	S	S	R	S	A	A	I
Confirm Existing Requirements Appendix C	S	S	S	R	S	A	A	I
Confirm Existing Requirements Appendix D	S	S	S	R	S	A	A	I
Confirm Existing Requirements Appendix E	S	S	S	R	S	A	A	I
Confirm Existing Requirements Appendix F	S	S	S	R	S	A	A	I
Confirm Existing Requirements Appendix G	S	S	S	R	S	A	A	I
Confirm Existing Requirements Appendix H	S	S	S	R	S	A	A	I
Facilitate Joint Application Design	I	S	S	R	S	A	A	I
Restrictions Based upon Framework	S	S	S	R	S	A	A	I
Complete Concise Design Documents	S	S	S	R	S	A	A	I
Perform Dimensional Data Modeling	R	S	S	S	S	A	A	I
Create Logical and Physical Data Model	S	R	S	S	S	A	A	I
Create Dimensional Model Design	R	S	S	S	S	A	A	I



RASIC Chart

Resource Responsibility R - Primary Responsibility A - Approval Authority S - Supporting Responsibility I - Information Only C - Consult	SAS Application Architect	Microsoft Business Intelligence Solution Architect	Key Project Manager	Key System Architect/DBA	Dewpoint Team	SoM Executive Subject Matter Experts	SoM Project Manager	SoM
Create ETL Specification Plan	R	S	S	S	S	A	A	I
Create OLAP/Analysis Services Database Design	R	S	S	S	S	A	A	I
Create Queries and Reports	R	S	S	S	S	A	A	I
Create Metadata Directory Plan	R	S	S	S	S	A	A	I
Procure Metadata Repository Solution	I	S	S	S	S	A	A	R
Populate Solution with Metadata	R	S	S	S	S	A	A	I
Adjust and Maintain Metadata Repository	R	S	S	S	S	A	A	I
Document the Process to Update and Maintain Repository	R	S	S	S	S	A	A	I
Report and Data Extract Design	R	S	C	S	S	A	A	I
Technical Specification Documentation	R	S	C	S	S	A	A	I
User Acceptance Test Cases and Plan	I	S	S	R	S	A	A	I
User Acceptance Test Cases	S	S	S	S	R	A	A	C
User Acceptance Expected Results	I	S	S	S	R	A	A	C
User Acceptance Test Data Edit and Data Validation Criteria	I	S	S	S	R	A	A	C
User Acceptance Test Functional Coverage	S	S	S	S	R	A	A	C
User Acceptance Test Boundary Coverage	S	S	S	S	R	A	A	C
User Acceptance Test Negative Testing Plan	S	S	S	S	R	A	A	C
Provide and Maintain Capacity Plan	S	S	S	R	S	A	A	C
Provide and Maintain Configuration Plan	C	S	S	R	S	A	A	C



RASIC Chart

Resource Responsibility R - Primary Responsibility A - Approval Authority S - Supporting Responsibility I - Information Only C - Consult	SAS Application Architect	Microsoft Business Intelligence Solution Architect	Key Project Manager	Key System Architect/DBA	Dewpoint Team	SoM Executive Subject Matter Experts	SoM Project Manager	SoM
Provide Installation Plan	S	S	S	R	S	A	A	C
Create Test Plan	S	S	R	S	S	A	A	C
Create Test Schedule	S	S	R	S	S	A	A	C
Turnover Plan	S	C	R	S	S	A	A	C
Stage Gate Review Acceptance Criteria	I	I	R	S	S	A	A	I
Construction of Database Tables and Indexes	S	R	I	S	S	A	A	I
Construction of ETL Processes	P	S	I	S	S	A	A	I
Construction of Test Cases	S	S	R	S	S	A	A	I
Construction of Reports	R	S	S	S	S	A	A	I
Construction of Data Extracts	R	S	S	S	S	A	A	I
Development of User Acceptance Test Scenarios	C	C	R	S	S	A	A	I
Test System Requirements	C	C	R	S	S	A	A	I
Test System Performance	C	C	R	S	S	A	A	I
Test Quality Assurance – System Integration	S	S	R	S	S	A	A	I
Execute Performance/ Load Testing	S	S	R	S	S	A	A	I
Manage User Acceptance Testing	C	S	R	S	S	A	A	I
Twice Weekly Testing Metrics	I	I	R	S	S	A	A	I
Review Test Procedures and Test Results	C	C	R	S	S	A	A	I
Install and Configure All Environments	C	C	R	S	S	A	A	I



RASIC Chart

Resource Responsibility R - Primary Responsibility A - Approval Authority S - Supporting Responsibility I - Information Only C - Consult	SAS Application Architect	Microsoft Business Intelligence Solution Architect	Key Project Manager	Key System Architect/DBA	Dewpoint Team	SoM Executive Subject Matter Experts	SoM Project Manager	SoM
Training of State and Key Technical Resources	S	S	R	S	S	A	A	I
Procurement of 50 SAS Training Credits	S	I	R	S	S	A	A	I
Data Warehouse Methodology Training	I	C	R	S	S	A	A	I
ETL/Architecture Tool Training	I	I	R	S	S	A	A	I
Provide Other Training	C	C	R	S	S	A	A	I
Create Turnover Plan	S	S	R	S	S	A	A	I
Execute Turnover Plan	C	C	R	S	S	A	A	I
Create Final Turnover Report	S	S	R	S	S	A	A	I
Final Update System Documentation	S	S	R	S	S	A	A	I
Optional Future Phase Definition	C	C	R	S	S	A	A	I
Optional Requirements Definition	C	S	R	S	S	A	A	I
Manage all defined Bidder responsibilities in this Scope of Services	I	I	R	S	S	A	A	I
Manage Bidder's sub-contractors, if any	I	I	R	S	S	A	A	I
Develop the project plan and schedule, and update as needed	C	C	R	S	S	A	A	I
Serve as the point person for all project issues	C	C	R	S	S	A	A	I
Coordinate and oversee the day-to-day project activities of the project team	C	C	R	S	S	A	A	I
Assess and report project feedback and status	C	C	R	S	S	A	A	I
Escalate project issues, project risks, and other concerns	C	C	R	S	S	A	A	I
Review all project deliverables and provide feedback	S	S	R	S	S	A	A	I



RASIC Chart

Resource Responsibility R - Primary Responsibility A - Approval Authority S - Supporting Responsibility I - Information Only C - Consult	SAS Application Architect	Microsoft Business Intelligence Solution Architect	Key Project Manager	Key System Architect/DBA	Dewpoint Team	SoM Executive Subject Matter Experts	SoM Project Manager	SoM
Proactively propose/suggest options and alternatives for consideration	S	S	R	S	S	A	A	I
Prepare project documents and materials	S	S	R	S	S	A	A	I
Manage and report on the project's budget	I	I	R	S	S	A	A	I
Develop the overall data architecture strategy of the system, ensuring reusability, integration, and optimization	S	S	I	R	S	A	A	I
Perform detailed data and requirements analysis and developing the dimensional data model	P	S	I	R	S	A	A	I
Ensure system addresses the State's business requirements and enforces rules and performs calculations efficiently and accurately as identified by the State	S	S	I	R	S	A	A	I
Work with the Project Manager to develop plans for the overall development of the system and ensure that the proper design documentation has been developed	S	S	S	R	S	A	A	I
Serve as technical subject matter expert on data warehousing methodology used on the project and tools used in the system's development	S	S	S	R	S	A	A	I
Manage the physical design of the system and all its component parts	S	S	S	R	S	A	A	I
Architect ETL process from end-to-end including coordination of testing activities	P	S	S	R	S	A	A	I
Coordinate knowledge transfer and phase hand-off to State resources	S	S	S	R	S	A	A	I
Resolve project issues in a timely manner	S	S	S	S	S	R	S	I
Review project plan, status, and issues	S	S	S	S	S	R	S	I
Resolve deviations from project plan	S	S	S	S	S	R	S	I



RASIC Chart

Resource Responsibility R - Primary Responsibility A - Approval Authority S - Supporting Responsibility I - Information Only C - Consult	SAS Application Architect	Microsoft Business Intelligence Solution Architect	Key Project Manager	Key System Architect/DBA	Dewpoint Team	SoM Executive Subject Matter Experts	SoM Project Manager	SoM
Provide acceptance sign-off	I	I	I	I	I	R	S	I
Utilize change control procedures	C	C	C	C	C	R	S	I
Ensure timely availability of State resources	I	I	I	I	I	R	S	I
Make key implementation decisions, as identified by the Bidder's project manager, within 48-hours of their expected decision date	I	I	S	I	I	R	S	I
Provide State facilities, as needed Coordinate the State resources necessary for the project	I	I	S	I	I	S	R	C
Facilitate coordination between various external Bidders	I	I	S	I	I	S	R	C
Facilitate communication between different State departments/divisions	I	I	S	I	I	S	R	C
Provide acceptance and sign-off of deliverable/milestone	I	I	S	I	I	S	R	C
Provide acceptance and sign-off of deliverable/milestone	I	I	S	I	I	S	R	C
Review and sign-off of timesheets and invoices Resolve project issues	I	I	S	I	I	S	R	C
Escalate outstanding/high priority issues Utilize change control procedures	I	I	S	I	I	S	R	C
Conduct regular and ongoing review of the project to confirm that it meets original objectives and requirements	I	I	S	I	I	S	R	C
Document and archive all important project decisions	I	I	S	I	I	S	R	C
Arrange, schedule and facilitate State staff attendance at all project meetings	I	I	S	I	I	S	R	C



Appendix C – Technical Requirements
See Attached

Appendix D - [Intentionally Excluded]

Appendix E – [Intentionally Excluded]

Appendix F – MSLDS Extract list and preliminary State RASIC
See Attached

Appendix G – Intentionally Excluded]

Appendix H – Cost Tables



Appendix H

Table 1: Summary of the Project Cost

	Project Cost(s)	Cost (\$)	Comments
A.	Project Planning Breakdown provided in Table 2	\$65,226.67	The Contractor is providing a Project Manager, Chief Architect, Business Analyst and Information Architect for the Duration of the Planning Phase of the project. This team will complete the specified planning as well as additional tasks required for successful project startup.
B.	Business Requirements Breakdown provided in Table 2	\$174,570.67	As stated in the response and detailed in the project plan, the Contractor's will be executing parallel requirements clarification sessions
C.	Technical Architecture and Design Give breakdown in Table 2	\$570,902.00	The Contractor 's Team will be executing the Technical Architecture and Design tasks as detailed in the project plan
D.	Development and Testing Give breakdown in Table 2	\$468,773.33	The Contractor's Team will be executing the Development and Testing tasks as detailed in the project plan
E.	Implementation and Testing Give breakdown in Table 2	\$31,973.33	The Contractor's Team will be executing the Implementation and Testing tasks as detailed in the project plan
F.	Training Give breakdown in Table 3	\$61,354.16	The Contractor will be providing SAS training credits as well as onsite training from Red Cedar Solutions Group
G.	Knowledge Transfer/Transition Give breakdown in Table 5	\$20,973.33	The Contractor Team will be executing knowledge transfer, training and job shadowing throughout the life of the project. This cost represents the conclusion of these processes
H.	Future Enhancements/Rate Card Give breakdown in Table 6		Roles and Rates are contained in Table 6. Based on the State's direction those costs have not been summarized in this table
I.	Warranty Provide details in the comments column if applicable	\$36,120.00	The Contractor has provided a project plan which includes a 60 day warranty period. During this 60 day period the Contractor will continue to staff the project at a rate of .25 of the Project Manager and .25 of the Chief Architect
J.	Other Give breakdown in the Comments column if other costs are included in the Contractor's response	\$68,333.33 \$35,000.00	250 Hours of a SAS Architect includes an additional 50 hours beyond what is identified in the proposal Assumes 9 months of Sharepoint in a SaaS model
	Total Project Cost	\$1,533,226.83	



Table 2: New Application or Customization of COTS - Business Requirements, Design, Development and Implementation Costs

Category		Total cost (\$) (Contractor must transfer category totals to Table 1)	Comments (Contractor must provide a narrative to explain how they arrived at the costs identified)
A.	Project Planning	\$65,226.67	
	Electronic Project Library (see Section 1.104)	\$8,153.33	The Contractor will be providing a Project Manager, Chief Architect and Business Analyst throughout the duration of the Project Planning Phase
	Quality Management Plan (see Section 1.104)	\$8,153.33	The Contractor will be providing a Project Manager, Chief Architect and Business Analyst throughout the duration of the Project Planning Phase
	Documentation and Standards Plan (see Section 1.104)	\$8,153.33	The Contractor will be providing a Project Manager, Chief Architect and Business Analyst throughout the duration of the Project Planning Phase
	Updated Project Plan (see Section 1.301)	\$8,153.33	The Contractor will be providing a Project Manager, Chief Architect and Business Analyst throughout the duration of the Project Planning Phase
	Project Status Reporting Template (see Section 1.302)	\$8,153.33	The Contractor will be providing a Project Manager, Chief Architect and Business Analyst throughout the duration of the Project Planning Phase
	Issue Management Plan (see Section 1.401)	\$8,153.33	The Contractor will be providing a Project Manager, Chief Architect and Business Analyst throughout the duration of the Project Planning Phase
	Risk Management Plan (see Section 1.402)	\$8,153.33	The Contractor will be providing a Project Manager, Chief Architect and Business Analyst throughout the duration of the Project Planning Phase
	Change Management Plan (see Section 1.403)	\$8,153.33	The Contractor will be providing a Project Manager, Chief Architect and Business Analyst throughout the duration of the Project Planning Phase
B. See Section 1.104	Business Requirements Phase 1 requirements clarification and modification and creation of all requirements documentation	\$174,570.67	The Contractor's Team will be executing requirements clarification in parallel. The Contractor's Team will be working with the State as defined in our response and project plan.



C. See Section 1.104	Technical Architecture and Design	\$570,902.00	
	Technical Design Documentation	\$101,266.67	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.
	Metadata Directory Plan	\$64,042.00	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.
	User Acceptance Test Cases	\$34,133.33	The Contractor's Business Analyst will create the test scenarios as scheduled in the project plan.
	Capacity Plan	\$74,292.00	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.
	Configuration Plan	\$74,292.00	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.
	Installation Plan	\$74,292.00	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.
	Test Plan	\$74,292.00	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.
	Turnover Plan	\$74,292.00	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.



D. See Section 1.104	Development and Testing	\$468,773.33	
	Source Code and Artifacts	\$324,426.67	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.
	Testing and Test Results	\$144,346.67	The Contractor's Technical Team will be creating the required deliverables in accordance with the RFP response and project plan.
E. See Section 1.104	Implementation	\$31,973.33	
	Production Environment (see section 1.104 E)	\$15,986.67	The Contractor is proposing a configuration management plan which does not conclude with a single roll out. This cost reflects the conclusion of a process which facilitates incremental builds
	MSLDS Implementation	\$15,986.67	The Contractor is proposing a configuration management plan which does not conclude with a single roll out. This cost reflects the conclusion of a process which facilitates incremental builds
		\$1,311,446.00	
	Combined Total	\$1,311,446.00	



Table 3: Breakdown of Training and Documentation Cost

	Training and Documentation	Cost (\$)	Cost per Individual	Comments
F. See Section 1.104	Training (see Section 1.104)			
	Training of state and key external technical team members on system maintenance, operation and data query/extract processes of the system	\$15,000.00		
	Procurement of 50 SAS training credits	\$16,354.16		This may be billed separately from the rest of training deliverables.
	Data Warehouse methodology training (10 people)	\$15,000.00	1500	
	ETL/Architecture tool training (5 people)	\$15,000.00	3000	
	Other training to be specified by the Contractor (10 people)(specify additional training required to enable the State to successfully support the Contractor's proposed solution)			Optional: 150 APTO SAS Training Credits for additional State of Michigan SAS Training \$49,375
	Total Training and Documentation Cost	\$61,354.16		

**Table 4: Knowledge Transfer/Transition**

G. See Section 1.104	Knowledge Transfer/Transition	Total cost (\$)	Comments
		(Contractor must transfer category totals to Table 1)	(Contractor must provide a narrative to explain how they arrived at the costs identified)
	Updated Turnover Plan	\$4,076.67	The Contractor's is proposing a process which continually updates the required plan during all phases of the project. This cost reflects the cost of the final update and closure of the document.
	Final Turnover Report	\$4,076.67	The Contractor's is proposing a process which continually updates the required plan during all phases of the project. This cost reflects the cost of the final update and closure of the document.
	Updated Documentation	\$12,820.00	The Contractor is proposing a process which continually updates the required plan during all phases of the project. This cost reflects the cost of the final update and closure of the document.
	Total Knowledge Transfer/Transition Cost	\$20,973.33	



Table 5: Future Phase Requirements/Other Services/Rate Card

No.	Staffing Category	Estimated Hours per year*	Firm Fixed Hourly Rate Year 1	Firm Fixed Hourly Rate Year 2	Firm Fixed Hourly Rate Year 3	Firm Fixed Hourly Rate Year 4
H. See Section 1.104	Hourly rates					
	Project Manager	250	\$125.00	\$125.00	\$125.00	\$125.00
	Systems Architect/DBA	500	\$176.00	\$176.00	\$176.00	\$176.00
	ETL Developer	250	\$137.50	\$137.50	\$137.50	\$137.50
	Report Developer	250	\$106.25	\$106.25	\$106.25	\$106.25
	Business Analyst/Requirements Facilitator	750	\$100.00	\$100.00	\$100.00	\$100.00
	Quality Assurance Analyst	200	\$131.25	\$131.25	\$131.25	\$131.25
	Technical Writer	200	\$80.00	\$80.00	\$80.00	\$80.00
	Database Administrator	250	\$131.25	\$131.25	\$131.25	\$131.25
	Director Level Subject Matter Expert	50	\$165.00	\$165.00	\$165.00	\$165.00
	Configuration Management Expert	50	\$125.00	\$125.00	\$125.00	\$125.00
	Information Architect	100	\$125.00	\$125.00	\$125.00	\$125.00
	SAS Architect	250	\$256.25	\$256.25	\$256.25	\$256.25
	SAS Developer	250	\$137.50	\$137.50	\$137.50	\$137.50
	Microsoft Developer	250	\$81.25	\$81.25	\$81.25	\$81.25
	Sharepoint Engineer	100	\$110.00	\$110.00	\$110.00	\$110.00
	Total Bank of Hours = \$487,000.00					

*** Hours are estimates only. The State reserves the right to modify the estimated hours for duration of this contract.**

Notes:

- Hourly rates quoted are firm, fixed rates for the duration of the contract, including all option years. Travel and other expenses will not be reimbursed. "Estimated Hours" and "Extended Price" are non-binding and will be used at the State's discretion to determine best value to the State. The State will utilize the fully loaded hourly rates detailed above for each staff that will be used as fixed rates for responses to separate statements of work.
- The parties agree that the Services/Deliverables to be rendered by Contractor using the future enhancements/rate card on this Contract will be defined and described in detail in separate Statements of Work. Contractor shall not be obliged or authorized to commence any work to implement a Statement of Work until authorized via a purchase order issued against this Contract.

**Table 6: Optional One Maintenance FTE**

No.	One Maintenance FTE	Identify Key Staff	Firm Fixed Hourly Rate	Cap Hours per year
G. See Section 1.104				
	Year one	Chris Hyde	\$102.50	1984
	Year two	Chris Hyde	\$102.50	1984